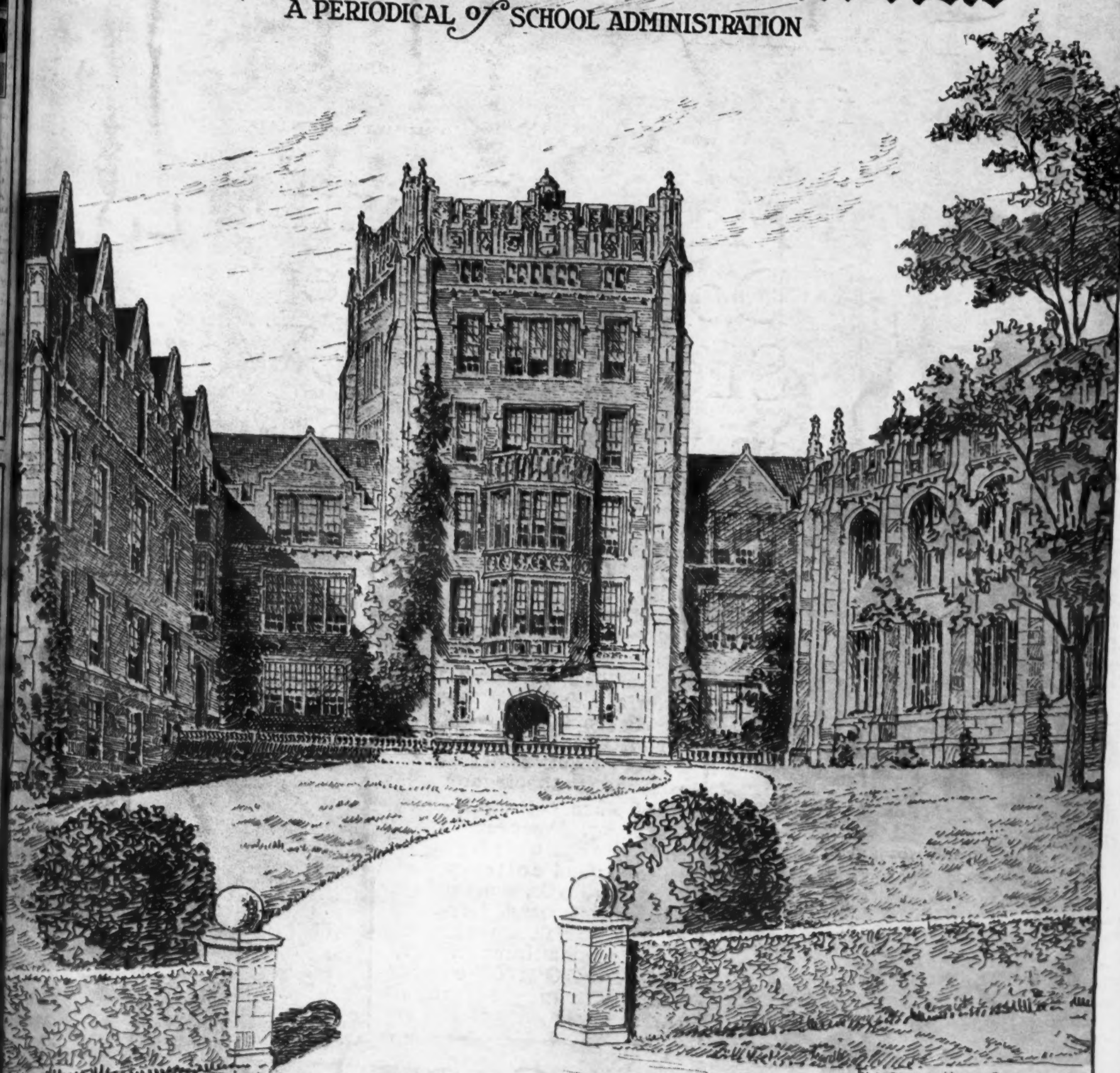


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THE AMERICAN School Board Journal

A PERIODICAL OF SCHOOL ADMINISTRATION

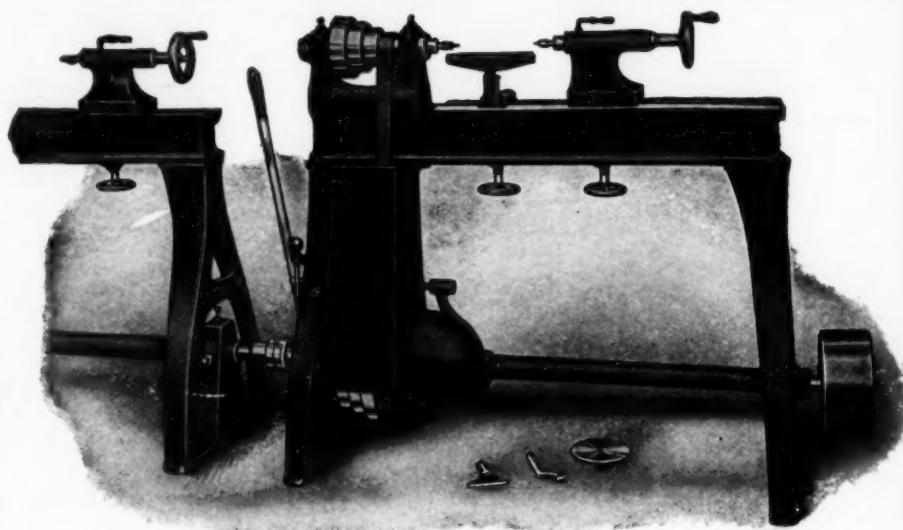
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FLUSHING HIGH SCHOOL
C. B. U. SNYDER, ARCHITECT

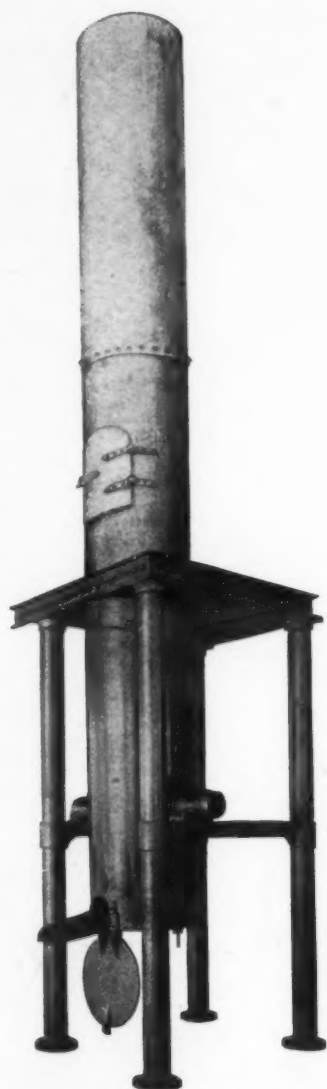
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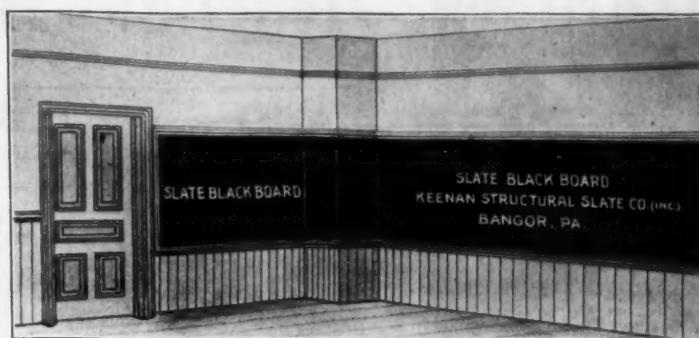
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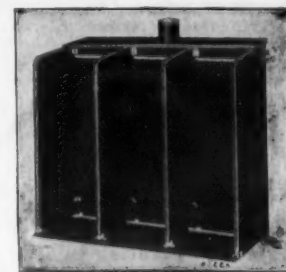
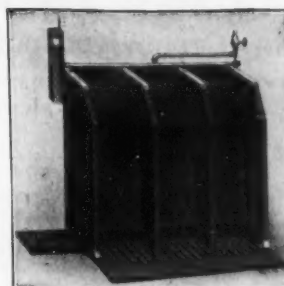


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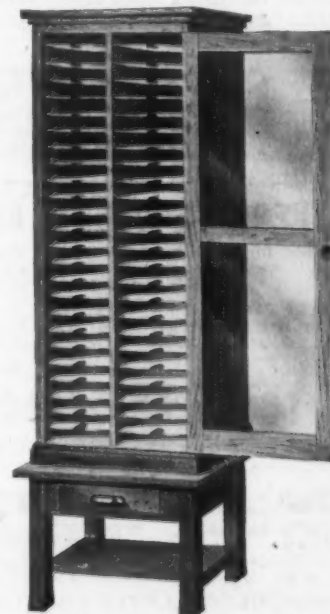
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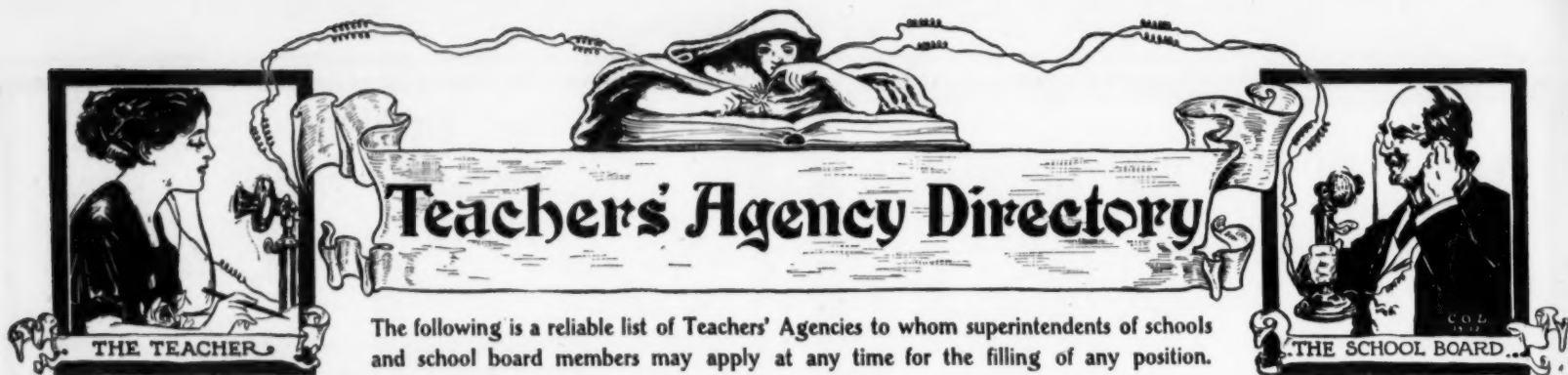
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The 1913 Revolution in Vacuum Cleaning

Revolution Number 1

TEN years ago the school authorities of this country revolted against the old broom method of sweeping schools. Then came the sawdust period, the sweeping-compound and the oil brush. The situation was not even relieved. Tests of air proved all systems to be ineffective. The coarse dirt was being removed, but most of the pulverized dust was merely being stirred up and crowded into cracks, corners, legs of desks, etc.

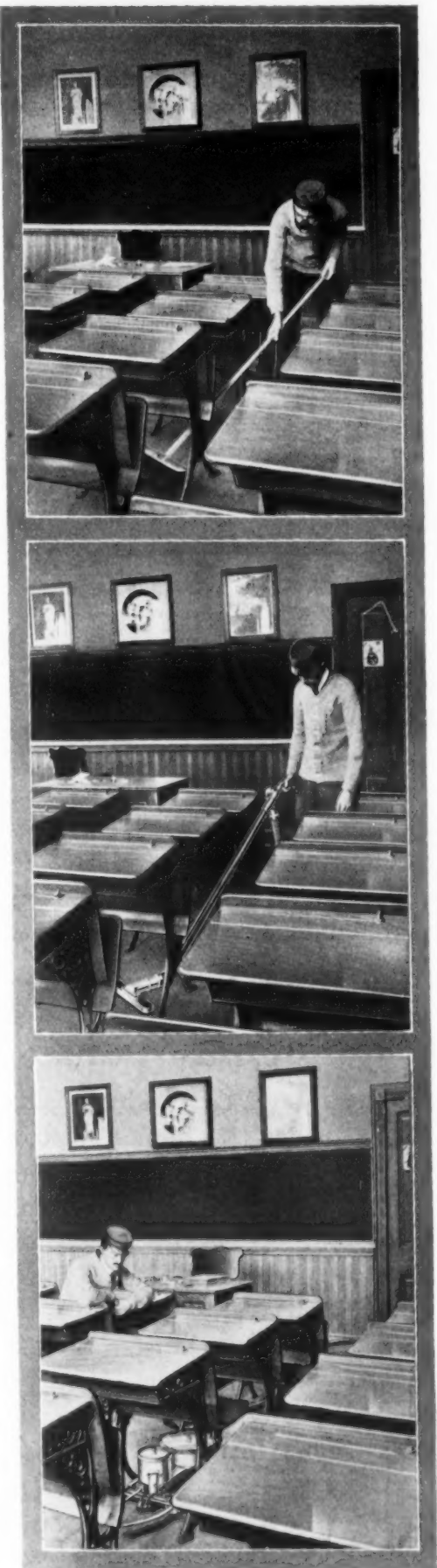
Revolution Number 2

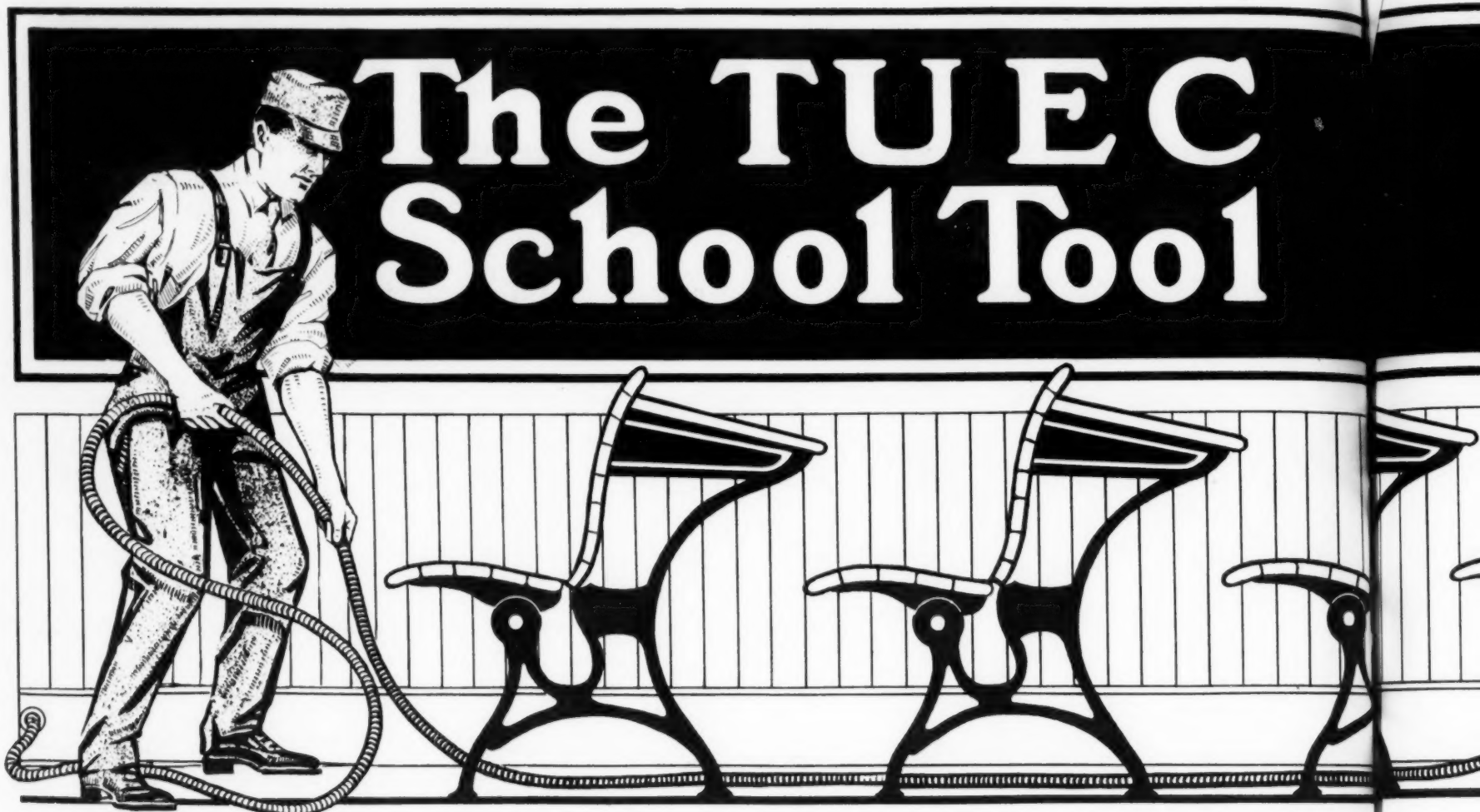
THEN five years later came vacuum cleaning with all sorts of tools and machines to clean school buildings. Immediately the desk problem became apparent. Janitors could not sweep between the legs of desks quickly or effectively. All sorts of tools and ideas were tried. The work took almost as long a time as the old broom method. Of course the TUEC SYSTEM cleaned schools a little more satisfactorily than any other system. It was, however, only a stepping stone to what was to come.

The 1913 Revolution

NOW we have the TUEC SCHOOL TOOL. It will revolutionize the cleaning of schools. It will cut down the janitor's labor and time in cleaning a school room by about one half! Think of it! Schools may be cleaned with the TUEC SCHOOL TOOL thoroughly and perfectly without any of the old back-breaking contortions; without tangling the hose and tool among the legs of desks; with all the advantages of Vacuum Cleaning minus the former troublesome features of this method. Read on Mr. Schoolman, Architect and Engineer.

The United Electric Co.
CANTON, OHIO



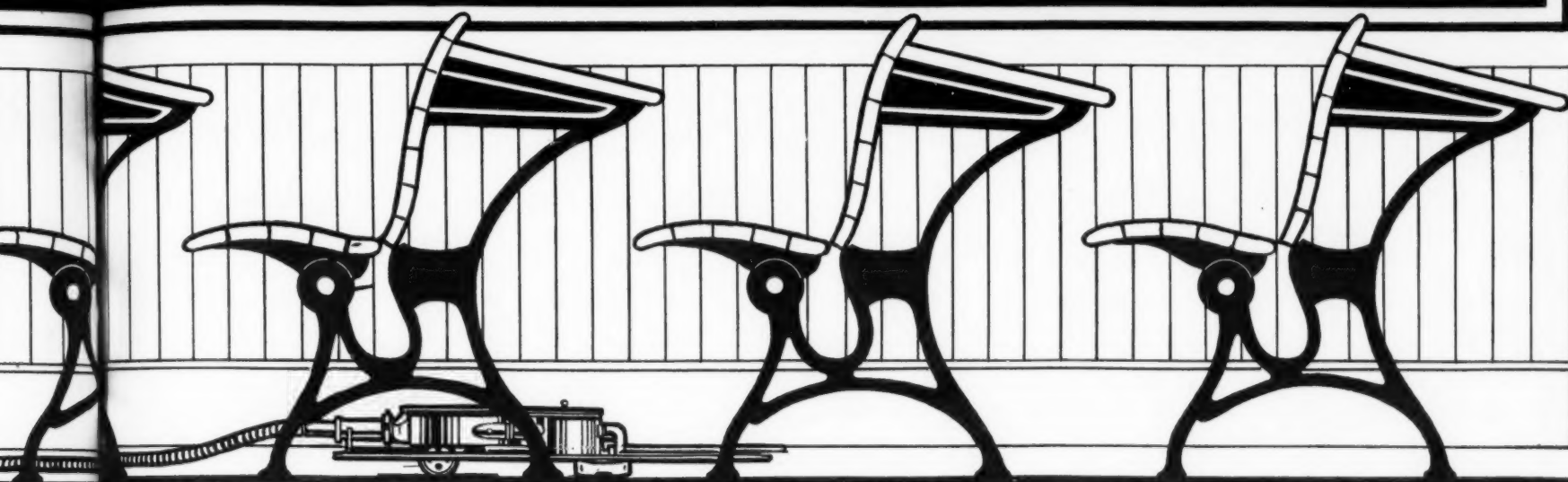


TWO Hundred and Twenty-four (224) obstacles confront every janitor every night in every classroom containing fifty-six school desks. Take seven rows of school desks, eight deep, and you have two hundred and twenty-four (224) legs fastened to the floor. Did you ever watch a janitor sweep around these 224 obstacles at night, in the winter when it's dark? Is it unreasonable even to expect one (1) man and several helpers to sweep the 10, 20, 30, 40 or 50 room school by artificial light and do a good job? Just think it over, you school men, architects and engineers, who build schools on hygienic and sanitary lines and equip your buildings with two hundred and twenty-four (224) obstacles in every school room which in a 10 room building run up to two thousand two hundred and forty (2240) and in a fifty room building may total eleven thousand two hundred (11,200) obstacles.

THE TUEC SCHOOL TOOL revolutionizes the problem entirely. No more pushing a tool around two hundred and twenty-four (224) desk legs per room. The TUEC SCHOOL TOOL "travels—watch it." Up and down, under the desks, and in the aisles it goes, cleaning not only the floor and the cracks, but every corner and crevice of every individual desk leg, never skipping a leg. No more back-breaking janitor work. No more guessing or missing. No more skipping rooms. No more janitors turning teachers out of school rooms at 3 P. M. to begin the night's cleaning. No more complaints about trailing hose and hose being worn out, by twisting about desk legs and retarding the progress of the sweeper. Down the next row it goes and again all desk legs are cleaned absolutely and thoroughly. Back it comes! Next is an aisle, then another row, and on and on until the room is cleaned. "What is the time?" you ask. Just about one-half the time in which that particular room was ever cleaned before, either by broom or ordinary Vacuum Cleaner Tool; or twenty rooms cleaned in the time it took to clean ten before! And the work more thoroughly done too. Think of it! It hardly seems possible.

The United Electric Co.

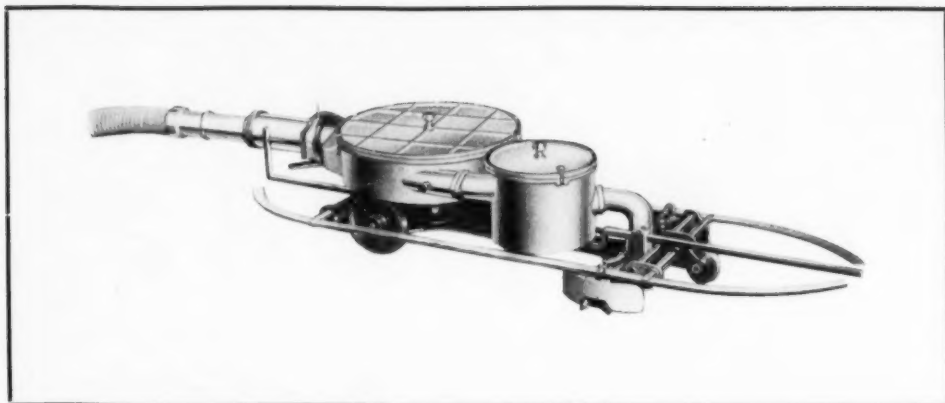
"It Travels —Watch It"



THIS wonderful method of school cleaning is effected by a tool invented by Mr. R. L. Cooley (and exclusively licensed to The United Electric Company), who may be called the father of vacuum cleaning in schools. Mr. Cooley was the first man to introduce vacuum cleaning system in the schoolhouse. As principal of a grade school in Milwaukee, Wis., the problem of schoolhouse cleaning had confused and perplexed him. The broom was criminal, sawdust was no better, oil brushes, etc., no better. Vacuum cleaning offered the ideal solution and then it was only a problem of machines and tools. Naturally the desk leg problem puzzled Mr. Cooley immediately. Then came the 'TUEC SCHOOL TOOL as the logical step in the solution of the problem. Now the TUEC SCHOOL TOOL travels. Watch it go down the row. See it clean every particle of dust from the legs of desks. Mr. Cooley, as a principal of many years' experience, saw the necessity. He made the TUEC SCHOOL TOOL travel, and it does — watch it. The TUEC SCHOOL TOOL is not an experiment, just being tried out. It has been in use more than a year, and at various times tests were made under the supervision of the United Electric Co. or its experts.

ECONOMY and Efficiency are the slogans of the day. School men demand economy and efficiency in every department of school work. The time of pupils is being economized. Elaborate systems are being introduced to safeguard the health, progress and growth of pupils. Efficiency is demanded of teachers, janitors and of all mechanical appliances that may be introduced in a school. The demand for results is apparent on every side. The TUEC SCHOOL TOOL will—1. Save approximately one-half of the time of janitors. 2. Clean the dust between desk legs most effectively. 3. Will eliminate all twisting of hose and tools in and out of desk legs. 4. Can be transferred from room to room with the greatest ease. 5. Will make cleaning possible between hours of 4 P. M. and 5:30 P. M., winter or summer. 6. Will reduce labor of janitor from dozens of motions to the guiding of one automatic tool. 7. Will clean cracks in floors between desks which ordinary vacuum cleaning machines cannot reach. 8. No more hurrying of teachers from room to room after school hours—The TUEC SCHOOL TOOL can do all the work in a minimum of time.

Electric Co., Canton, Ohio



THE TUEC SCHOOL TOOL is a sweeper which travels rapidly and automatically on the volume produced by the TUEC Stationary Air Cleaning plant in the basement. It guides itself absolutely through the feet of the school desk to the end of the row and then comes back at the will of the operator. The TOOL is so simple that any school boy can work it. There is nothing to get out of order. Everything is self-cleaning. The TOOL is set to travel up the row of desks on the one side and down the other, thus never missing a desk leg and sweeping the space between the desks practically twice.



THE TUEC Stationary Air Cleaning System is now the accepted standard system for the cleaning of school buildings. The high volume idea in vacuum cleaning for school houses where large quantities of dirt must be moved, has proven absolutely correct. TUEC plants are made from One (1) sweeper to Six (6) sweeper plants and can be installed just as specified by engineer and architect.

Write today for catalogs and information on the **TUEC SCHOOL TOOL**.

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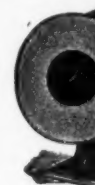
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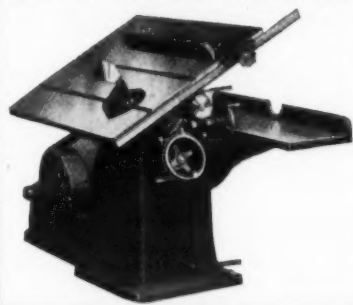
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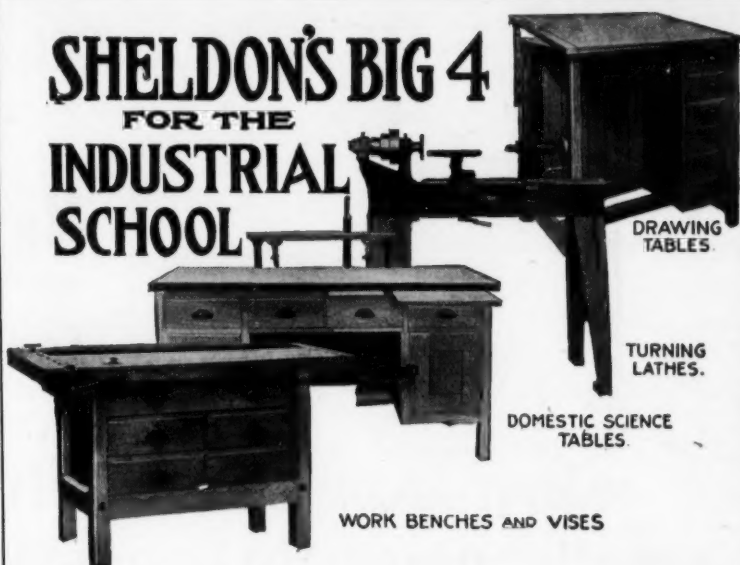
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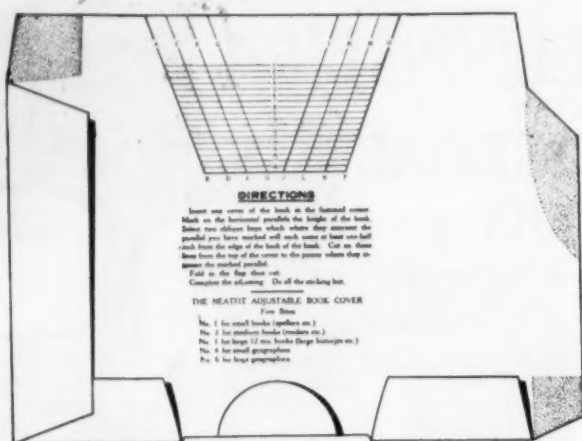
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Vol. 46

APRIL, 1913

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Volume XLVI, Number 4

APRIL, 1913

Subscription, One Dollar per Year



AN INTERESTED THIRD PARTY

(See Editorial)

FLUSHING HIGH SCHOOL.

The cover design of the present issue of the School Board Journal is taken from the perspective drawing of New York's newest and most artistic secondary school, the Flushing High School. The building is a complete departure from the general type of buildings which metropolitan conditions make necessary and will be quite a contrast to the Washington Irving High School just completed.

The borough of Flushing is, unlike Manhattan or Brooklyn, a section of the city in which land is still cheap enough to permit the purchase of sites which are larger than the actual ground surface which a schoolhouse shall occupy. Mr. Snyder has made good use of this opportunity and has planned a building which shall embody the style and spirit of the old English university groups and which shall harmonize with the natural beauty of site.

The building is to be an adaptation of the English Gothic in gray brick, terra cotta and stone. The main portion of the building will be three stories high, the auditorium a story and a half and the tower will be six stories high.

The site is a plot having a main frontage of 310 feet on Broadway and extending back 395 feet on one side, Whitestone Avenue, and 200 feet on the other, State Street. The land slopes sharply so that the easterly line at State Street is from 23 to 29 feet above the intersection of Broadway and Whitestone. By placing the comparative low auditorium on the highest portion of the lot at State Street, facing Broadway and setting the main classroom wing on the Whitestone side it is possible to make a harmonious structure without leveling the site. The tower, with the administrative rooms on each side will form the connecting structure between the wings and will be farthest from the street so as to form an interesting court.

In laying out the building the architect has especially kept in mind the fact that it is to become the civic center of Flushing. The auditorium which will seat one thousand persons will accordingly have entrances independent of the main building. It will be equipped for evening use, for lectures, concerts and meetings.

The whole building will cost complete approximately \$500,000 and will be ready for occupancy in March, 1915.

THE ARCHITECT AND HIS COMMISSION.

"It is a penny-wise and pound-foolish policy that prompts the client to ask his architect to give the best of his talent and experience and in the same breath to cut the rate of his commission," writes an architect to the Brooklyn Eagle. "The rates established by the Institute are no more than will give a fair return for the services rendered. The architect who shirks his duties to obtain a larger profit and the 'scab' who makes a practice of rate-cutting are in the same class, and inferior workmanship may be expected of both.

"No reputable architect will overcharge for his services. He is much more apt to undervalue them. Furthermore, he is in a position to save his client a sum as much as and often more than his commission by reason of his familiarity with the supply markets, and his experience in the use of materials of one kind and another. In a hundred and one ways he is fitted to suggest savings and economies unknown to the layman.

"It is not to be expected, however, that he will busy his brain seeking legitimate means of reducing the cost to the owner (when every dollar saved lowers his own commission proportionately), unless he feels that he is being adequately paid, and is insured a fair profit on his



WASHINGTON IRVING HIGH SCHOOL FOR GIRLS, NEW YORK, N. Y.
C. B. J. Snyder, Architect.



FLUSHING HIGH SCHOOL, NEW YORK, N. Y.
C. B. J. Snyder, Architect.

labors. The architect's commission is but a small part of the cost of the house, and the owner makes his first expensive mistake when he figures to 'save' anything on this score.

"When the architect is in possession of the 'clues' to the problem before him, its happy solution is merely a concern of his ability, to turn them to interesting account. The client should

(Concluded on Page 57)

Lewis P.

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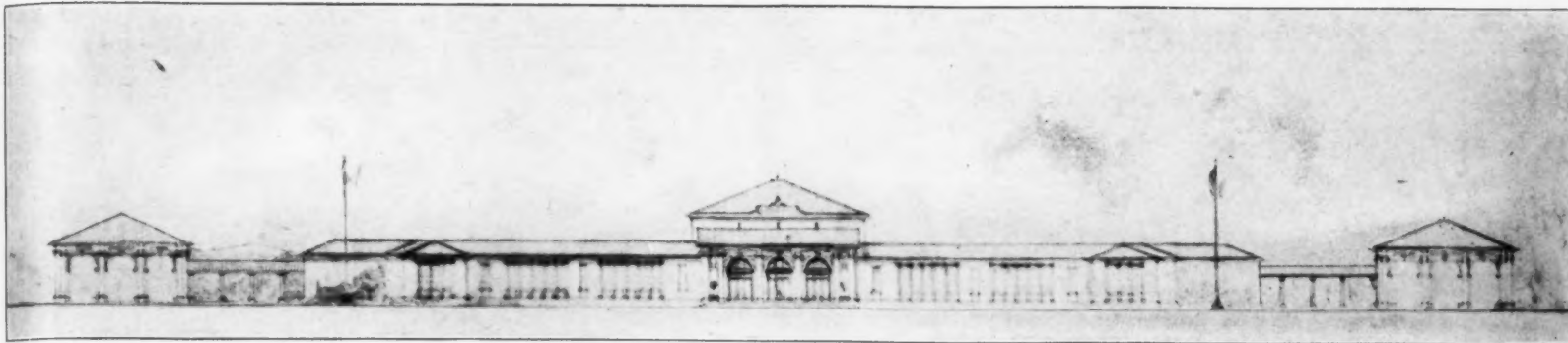
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Lewis P. Hobart, Architect.

ONE-STORY EXTENSIBLE UNIT TYPE—LOCKWOOD SCHOOL, OAKLAND, CAL.

J. J. Donovan, Supervising Architect.

The Oakland School Building Inquiry

By CHARLES HENRY CHENEY, Architect, San Francisco

From the Atlantic to the Pacific Coast, a determined cry goes up all over this country for better school buildings. The public-spirited men, who in most cases, act without pay as trustees of the school districts, seem everywhere to be trying to get complete information as to the most efficient type of schoolhouses that can be designed. While many local school directors travel up and down their state to see for themselves, they seldom have time for thorough investigation and they cannot be sure in the end that they have seen the latest and most advanced buildings. It is for this reason that bad local conditions are so often duplicated.

Local architects in many districts, like local school boards, are multiplying the sins of their fathers by attempting monuments of architecture—at the expense of the future efficiency and health of the children. They may do the best they can according to their lights—the sources of information concerning better things are unknown to them. But does that relieve them of obligation? Should public money be spent for anything but the best buildings?

It is evident that if we could know the foremost examples in the United States of each kind of school building, we could then go on and improve upon them and not make, over again a thousand times, the mistakes of former years.

The Oakland Problem.

With this in mind, and two million dollars to spend for new buildings, the city of Oakland, California, went at it in the right way and really found out. First, before designing buildings in their definite outline, a program of the necessities of the future was made—a comprehensive survey for years ahead. How many school boards do this? How many boards decide they will build permanent fire-proof structures so that when their bonds mature they will still have something for the money spent? Of course, permanent buildings take more ready money. But, is it not the trustees' duty to plan not for the present only, but for many years ahead? Should they not always build as many permanent rooms as possible and fill out pressing needs with cheap, temporary and portable schoolrooms?

Oakland found that the greatest improvement necessary was, first, the determining of what should go to make up a school building. What is the minimum size of schoolrooms for the maximum of efficiency? What are the relations to each other of doors, windows, teachers' rooms, blackboards, wardrobes, etc. To get at these points the board of education appointed a commission which acted without pay, sitting twice a week for two months, and which included by correspondence, the greatest experts in the

United States. The commission consisted of the following:

F. B. Dresslar, School Hygiene Expert, Bureau of Education, Washington, D. C. (by correspondence).

David S. Snedden, State Commissioner of Education of Massachusetts (by correspondence).

Leonard P. Ayres, Associate Director Russell Sage Foundation (by correspondence).

C. G. Hyde, Professor of Sanitary Engineering, University of California.

Louis M. Termann, Professor of Education, Stanford University.

John Galen Howard, Professor of Architecture, University of California.

A. C. Barker, Assistant Superintendent of Schools, Oakland.

E. Morris Cox, Assistant Superintendent of Schools, Oakland.

Mrs. Fred C. Turner, former teacher in the high school.

J. J. Donovan, Supervising Architect, Oakland.

J. W. McClymonds, City Superintendent of Schools, Oakland, Chairman.

In addition to the above named persons the principal of the particular school under consideration was a member of the Commission for all matters pertaining to that school building.

The corresponding experts acted through replies to a series of questions and voluntary suggestions and criticisms.

What the Commission Determined.

The commission studied first the schoolroom unit and adopted the principle of a multiple unit system, figuring as far as possible that buildings be built so that one or two or more classroom units could be added as necessity grew, until the maximum possible under one principal was reached.

They determined, too, a new unit, the open-air schoolroom and they found that this was not a shade tree with seats under it, but a room

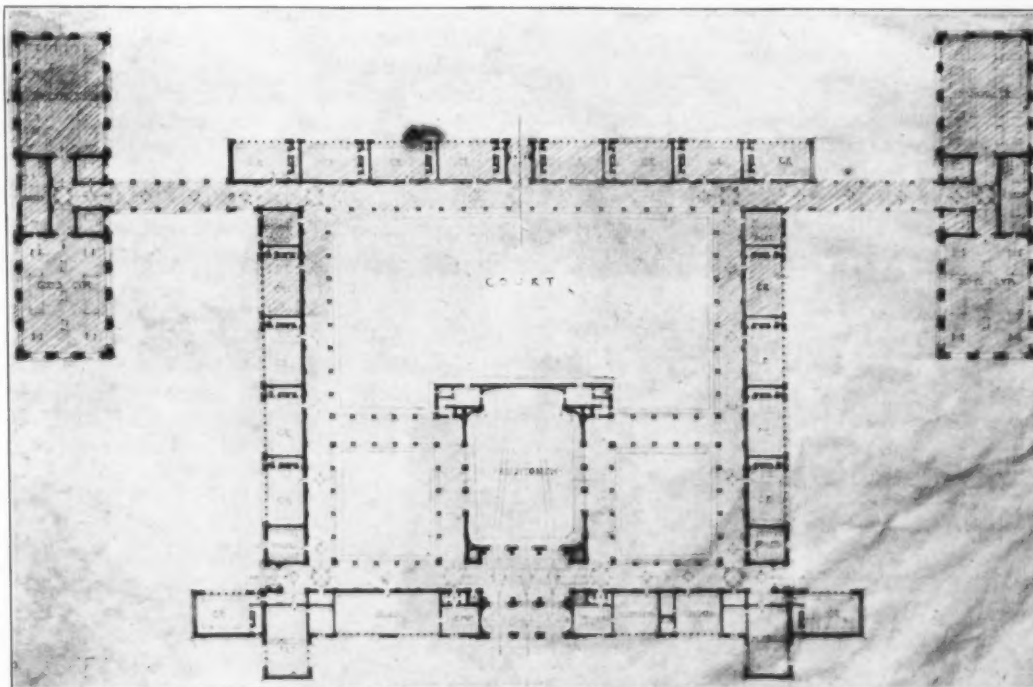
enclosed on three sides against prevailing winds, etc. They found also that wherever possible all the rooms in every schoolhouse should be on the same floor with open corridors. This gives a maximum of light and air since with large windows, grouped altogether on one side, a practically open room is assured. Manual training, music and commercial rooms were grouped with regard to noise. Only when the placing of single-story buildings appropriated so much of the school site that insufficient playground area was left, were two-story buildings recommended.

What other rooms should there be in a school building aside from the classrooms? That question is clearly and forcibly answered. Build the auditoriums, music rooms and the necessary offices first, with as many classrooms as possible, adopting an extensible plan for adding future classrooms as money is forthcoming.

For initiating this investigation and working ceaselessly to carry it through, no little credit is due the City Superintendent of Schools, Mr. J. W. McClymonds. A long friendship with Mr. Soldan of St. Louis had made him familiar with the school buildings designed by Ittner and other foremost architects of the country. As chairman of the commission, he succeeded in bringing forward an array of facts on the best design of school buildings that no board of education can afford to overlook.

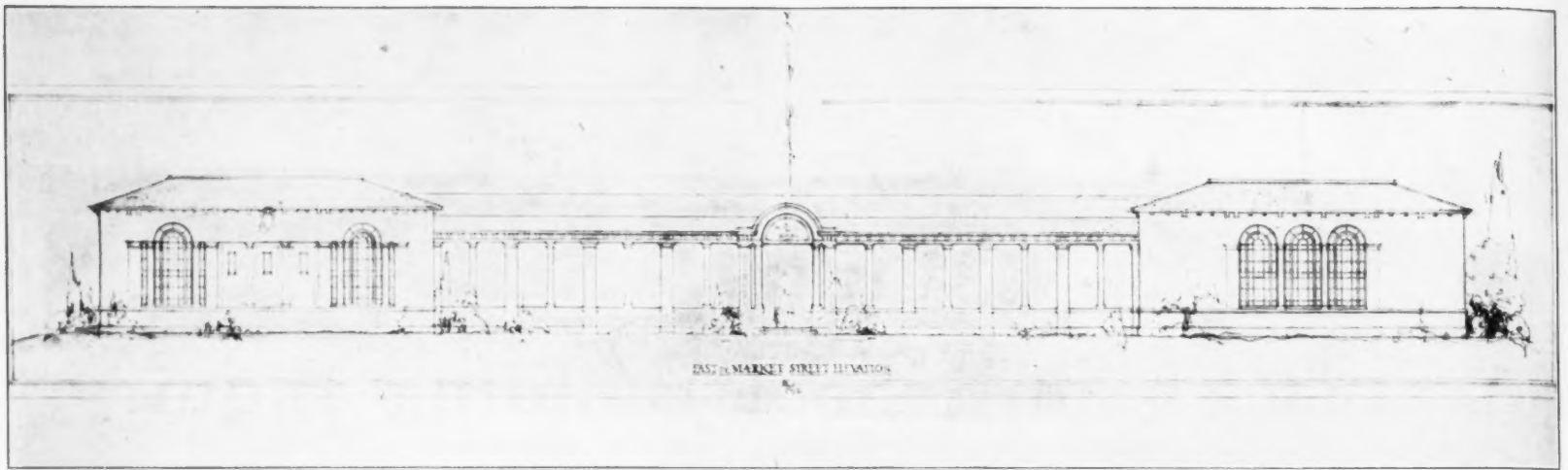
Executing the Findings.

Having thus prepared thoroughly and concisely a program of building, the most important part was yet ahead. The final execution of a good program is the hardest part of the problem. Oakland went at it in a right spirit. The board of education appointed as supervising architect, Mr. John J. Donovan, a man of broad-gauge principles, one who would not try to do all the



FLOOR PLAN, LOCKWOOD SCHOOL, OAKLAND, CAL.

Editor's Note—The first comprehensive study of the problems of school architecture, as applied to an important city, by an expert commission representing the widely differing view points of school administrator, supervisor, teacher, architect, sanitary engineer, and sociologist was made recently in Oakland, Cal. The very interesting conclusions arrived at by the Oakland commission and the important standards evolved by them are here summarized by an experienced architect and published for the first time.



FRONT ELEVATION, FIFTY-FOURTH AND MARKET STREET SCHOOL, OAKLAND, CAL. J. J. Donovan, Architect.

fourteen buildings himself in the short time allowed, one who had common sense and force enough to insist on calling in experts in design, one who was not hidebound or fettered by the slogan of "patronizing home architects". He recommended that the public money expended should be for the best designs to be obtained in the whole state instead of in the one city. He obtained the collaboration of six architects who were known by statewide repute to be successful in such designs.

The results obtained have more than justified their judgment. Able supervision is making the execution of the buildings from the drawings a marked success—it is one thing to have a fine set of drawings, but too many American architects fail in their execution. Other cities may well take note of the thoroughness and good judgment which Oakland has shown in the handling of this matter.

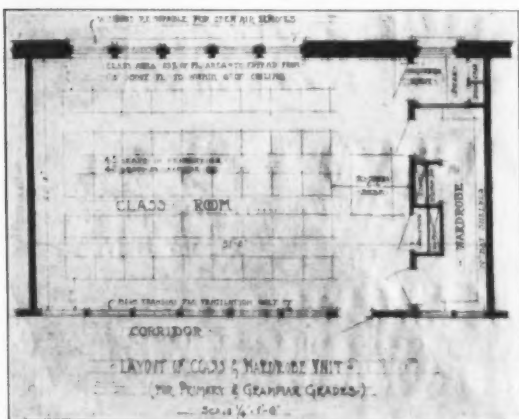
In the heating, ventilating and vacuum cleaning, plumbing and electrical work, the most salient fact was that the supervising architect insisted upon the city's employing an engineering expert in each of these lines, as well as a structural engineer to design and check all structures.

This system brought about expedition in each branch of the work and developed a thoroughness in arrangement, all the experts co-operating with the supervising architect. The old systems of plumbing were discarded and individual vitreous-china fixtures adopted. Manufacturers of fixtures were set in competition to furnish a standard set of specifications. This in time will give efficiency and perfect sanitary conditions. Each toilet is ventilated through the plumbing or the fixture, into an utility chamber from which the air is exhausted by a suction fan.

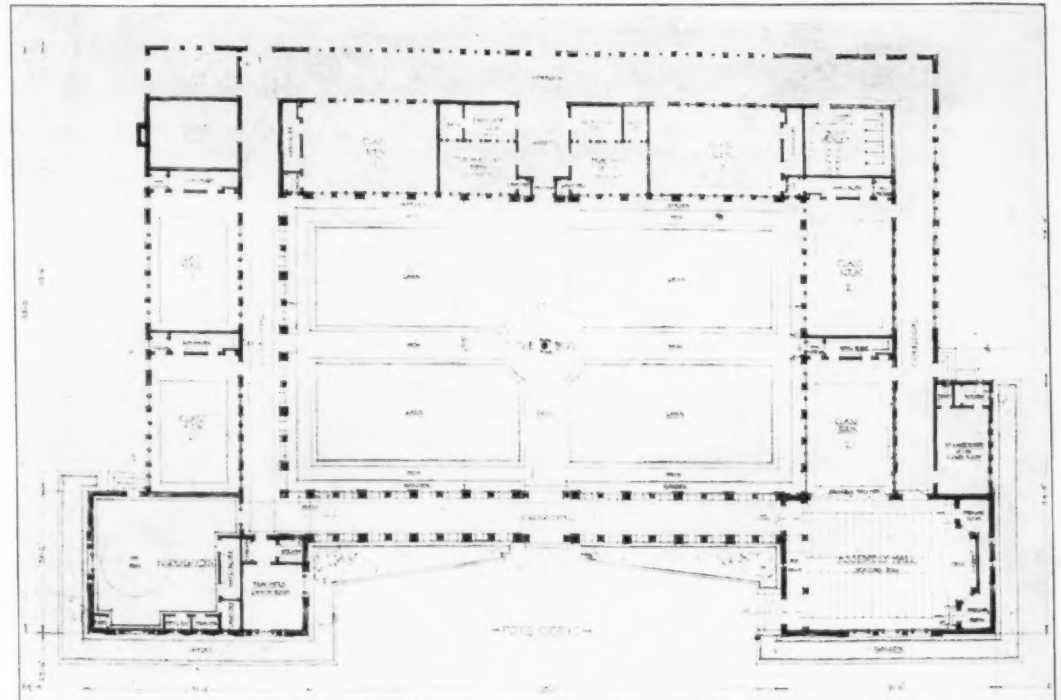
An Idea of the Buildings.

The reproduction of the drawings for some of the buildings which are now being constructed, show but poorly what the result will be.

The Lockwood School, designed by Lewis P. Hobart of San Francisco, is a straightforward example of the one-story multiple-unit plan with



STANDARD CLASSROOM PLAN.



FLOOR PLAN, FIFTY-FOURTH AND MARKET STREET SCHOOL.

rooms on one side of the corridor only. As the board did not have funds nor use, at present, for more than eight classrooms, the shaded portion shown was left for future development, when from the nature of the plan, one, two or more rooms can be added as needed.

The 54th and Market Sts. School is similar in type, furnishing the maximum of light and air. The design for this building was largely the work of Mr. J. J. Donovan, of Oakland, who also supervised the construction of all the other buildings.

In the Emerson School, by Prof. John Galen Howard of San Francisco, may be found a good example of the one-story building with classrooms on each side of the corridors. The College Avenue School by W. D. Reid, is also of this type, but chiefly interesting from the corner entrance with the auditorium placed on the diagonal in the rear.

Perhaps the most interesting of all the buildings shown is the Manual Training and Commercial High School, by Mr. Donovan. Here enough ground has been available properly to place the shops far in the rear and still leave room for the athletic field and gymnasium on the left.

The Longfellow School by Louis C. Mullgardt is of a type well suited to the California climate, and its design shows the Spanish influence, which is developing most forcibly on the Pacific Coast.

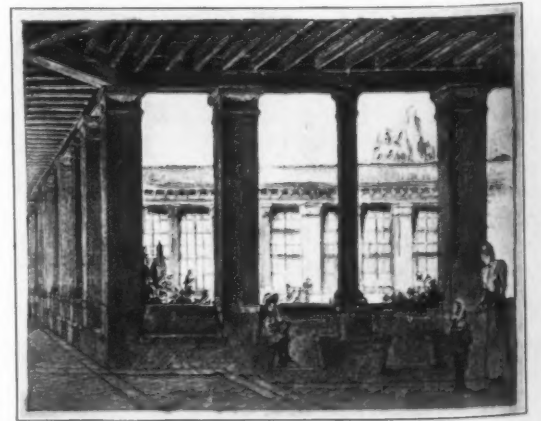
The Problem of the Commission.

The following excerpts from the body of the report contain more or less the meat of the findings:

In January, 1912, the City of Oakland, California, voted for the construction of new school buildings nearly \$2,000,000.

A few years ago it was a comparatively simple matter to plan and to build a school building. Now, with the demands made upon the schools, the task is more complex and difficult. The buildings are to be used, not only by the minors, but also by the adult population of the neighborhood. The schoolhouse must be available for any and all purposes that will tend to uplift society.

The members of the board of education realize the difficult task imposed upon them, and are anxious to include in the new school buildings space for all modern educational work, under the best hygienic conditions. They have appointed the Honorary Commission to report the most advanced ideas and practice in school buildings in this country and in Europe, from which a program for the architects could be formulated.



INTERIOR COURT, 54TH AND MARKET STREET SCHOOL.

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Some of the matters upon which the board of education asked advice was as follows:

Assembly Halls. Places for neighborhood meetings.

The Gymnasium. Shall it be an inside or an outside gymnasium? Shall the gymnasium serve also as an assembly hall?

Open-Air Schoolroom Problem. Shall all school-rooms be of the open-air kind? Shall these rooms be so constructed that they cannot be closed?

Lunch Room problem for serving lunch to pupils.

Bathroom, music room, hall for recitation room, for debates, rhetorical, etc.

Provision for the department of health development and sanitation.

Findings of the Commission.

The commission suggested that, as a preliminary, an expert should be employed as advisor in the location of the school buildings and the drawing of plans so that the plans be adapted to the sites and the buildings placed on the grounds to the best advantage.

It also recommended that the following rooms, in addition to regular classrooms, be provided for:

In Primary School Buildings.

Apparatus and map room (at least 150 square feet).

Assembly Hall.

Art room, part of or adjacent to corridor.

Baths, shower and one tub, public shower.

Bicycle rooms.

Club rooms, also a voting place (at least 16 by 24 feet).

Drying room.

Electric.

Gymnasium, outside, one boys' and one girls', each 50 by 72 feet with offices for physical director and director of social activities.

Janitor's room.

Kindergarten (24 by 50 feet).

Library (one adjacent to principal's office and one adjacent to the club room (10 feet by 12 feet).

Lunch room, pupils'.

Moving Picture.

Provision for Medical and Emergency Room, about 200 sq. ft.

Plant room.

Principal's room with library and store room attached, not less than 300 square feet.

Subnormal or ungraded room.

Teachers' rest room (at least 12 by 20 feet).

Teachers' cloakroom—individual—adjacent to classrooms.

In Grammar Schools.

In addition to rooms recommended for primary schools:

Manual Training (not less than 1,600 square feet).

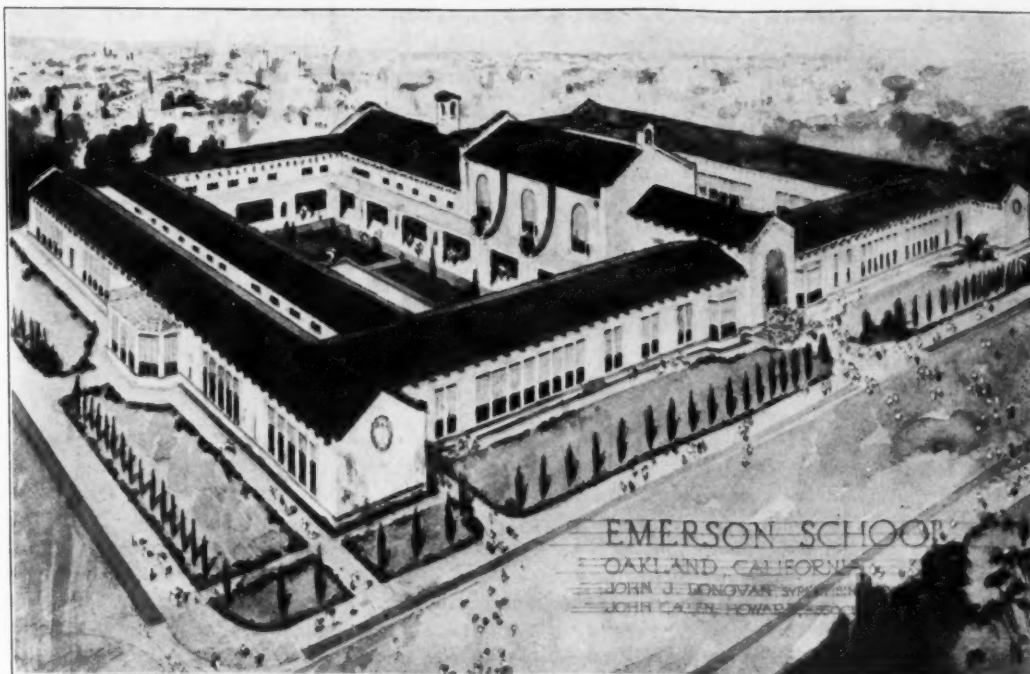
Domestic Science (24 by 38 feet), with additional locker room and lavatory.

Domestic Art (24 by 38 feet), with additional locker room and lavatory.

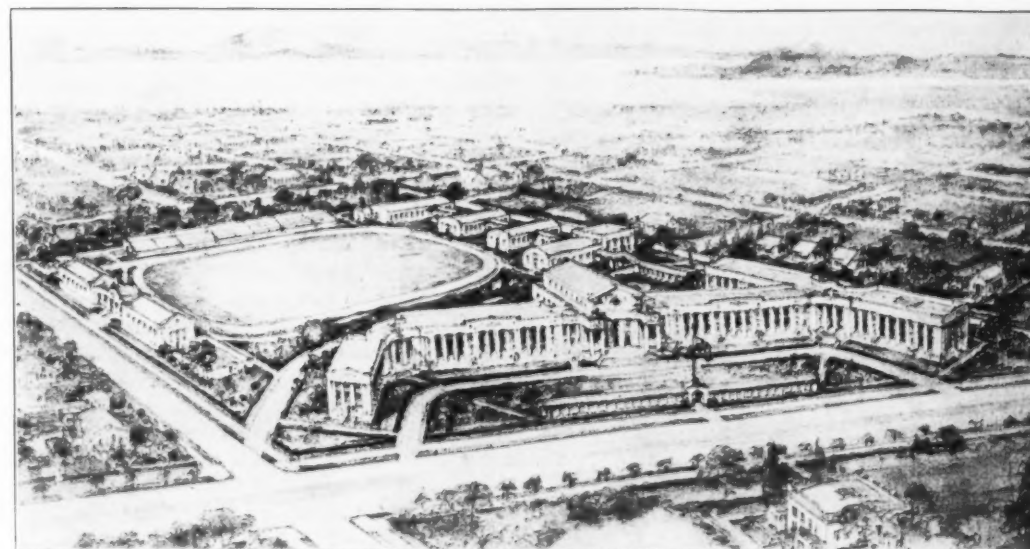
In intermediate high schools and other high schools, night schoolrooms should be provided for.

The floor of all basements used as classrooms, or for work at which pupils are regularly seated, shall be at or above grade. A basement playground shall have at least one side open to the outside air.

The size of the regular classrooms in all elementary schools shall be 22 by 30 feet and the seating capacity shall be fixed at a maximum of 45 desks.



EMERSON SCHOOL, OAKLAND, CAL.



MANUAL TRAINING AND COMMERCIAL HIGH SCHOOL, OAKLAND, CAL.

J. J. Donovan, Architect.

There shall be only one door to each classroom and this must be near the teachers' desk. Doors are to be supplied with door check and locks.

The width of all blackboards should be 3 feet 6 inches except that back of the teacher's desk the width shall be 5 feet 6 inches.

All plans should provide for the installation of electric clock and bell systems. Telephone communication connections should be installed between the principal's office and all classrooms to be connected both separately and connectively.

Electric bells by means of which all teachers shall be notified when ventilating fans are shut off shall be provided whenever ventilating fans are used and further that all indirect heating systems shall be so installed that individual

sunny rooms may be cut off from the heating system by the janitor, while the colder rooms are further supplied with heat.

All halls shall be provided with direct heating.

Provision shall be made for furnishing school-rooms much more fresh air at lower temperature than at present. We believe each regular classroom should receive at least 3,000 cubic feet per minute; other rooms proportionately.

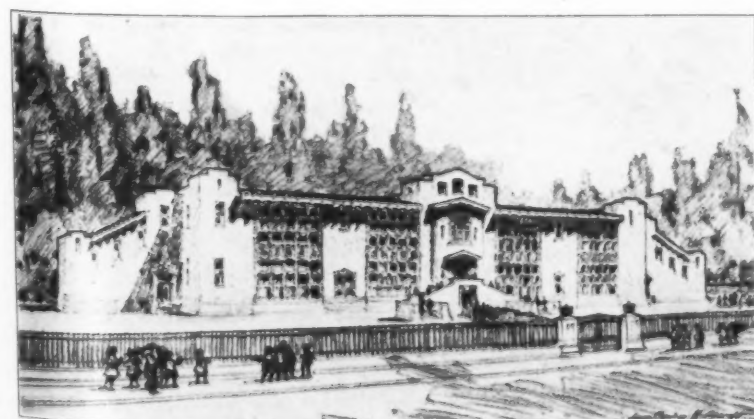
The heating apparatus should be isolated from the rest of the building by fire-proof walls.

All plans should preferably place all classrooms on one side of the corridor.

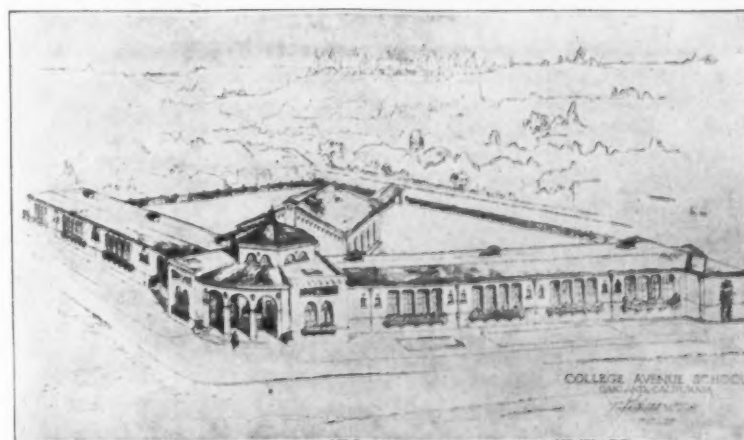
Ventilating transom from classrooms to halls should be installed.

All corridors should be straight, spacious, free from jogs and have stairways at the ends.

(Continued on Page 56)



LONGFELLOW SCHOOL, OAKLAND, CAL.
L. C. Mullgardt, Architect, San Francisco.



COLLEGE AVENUE SCHOOL, OAKLAND, CAL.
W. D. Reid, Architect, Oakland.

The Schoolhouse Department of Boston, Mass.

Viewed as a method of relieving boards of education or school committees of the direct responsibility for the purchase of land and erection of buildings.
The advantages and disadvantages of this system and its applicability to smaller communities

By R. CLIPSTON STURGIS, A. I. A. Formerly Chairman, Boston Board of Schoolhouse Commissioners

The Establishment of the Department.

For years the purchase of land and the erection of buildings had been a source of trouble, scandal and expense to the city of Boston. A large School Committee selected from and representing the twenty-five wards of the city, was given the task of determining where new buildings should be provided. This task was delegated to a sub-committee on new buildings. Places on this committee were eagerly sought for the power which went with the position. The sub-committee was ill-equipped to give wise or unbiased judgment. Their information was second or third-hand and colored by its source—from superintendent, from teachers, from parents, from representatives of the ward.

The Schoolhouse Department was established by an act of the legislature in 1901 to take all this out of the hands of the unpaid, inexperienced school committee, and put into the hands of a paid and presumably expert board, which, with a force of employees engaged in inspection and repair, was well placed to gain familiarity with the existing schools and with the problems connected with new buildings, and also with the trend of growth of school population.

The Composition.

The Boston board is a commission of three, who receive, the chairman \$4,000 and the others \$3,500 a year, and are appointed by the mayor without confirmation, for a term of three years. Under the new charter these commissioners, together with all other heads of departments, are made subject to confirmation by the Civil Service Commission. In many respects this board has accomplished what was expected by its originators. Schools have been located on the sole basis of an actual need—uninfluenced by local pressure; land has been purchased through public bids and hearings; buildings have been erected economically and well, and experience has enabled the board to establish standards which determine accurately the proper cost per pupil of the various types of buildings.

Duties and Responsibilities of the Board.

Briefly the system is this. The School Committee, acting under the expert advice of the superintendent, who has at his command all the information in the Schoolhouse Department, determines the school district where accommodation is needed. These districts in Boston contain one upper elementary and generally a number of lower elementary schools, a total of perhaps 2,500 pupils. The School Committee determines also the number of pupils to be accommodated. Here its duties and responsibilities end.

The Schoolhouse Department from this point on, is practically independent and provides the accommodation in any way it sees fit.

The object of this complete separation was to prevent the School Committee from disapproving a plan and thus having, in the last issue, control over the expenditure. The act required the Schoolhouse Department to obtain "opinion" of the superintendent, but even the "opinion" were adverse, the board could proceed provided the mayor would sign the contract.

Once the building is complete and furnished ready for occupation, it is turned over to the School Committee and the board has no further

control over it and no duties except that of keeping it in repair. The board has nothing to do with the janitor service, and can therefore control neither the operation of the plant, nor the care of the building.

The Operation of the Plan.

The School Committee designates where the building is to go and is advised therein by the Superintendent. In a large city the superintendent cannot be personally acquainted with the growth of population, and of school population,* in every part of the city. He must depend on the masters for his information. With each master comes the personal equation, and the same general situation in two similar districts may be interpreted in wholly different ways by two masters. Figures of attendance or registration are by no means final as indications of growth. In a seaboard town, immigration and emigration may upset figures in a month; in an inland town a manufacturing plant may do the same, although not quite so abruptly. The Schoolhouse Department which is not only building throughout the city but repairing (on the requisitions of a master endorsed by an inspector) every building in the city, has very direct information about all that concerns school population. The numbers in schools, the general building operations going on, the industries, the shifting of centers, are all under the eye of the inspector, and at least one and often all three of the paid commissioners are almost equally familiar with local conditions throughout the city. The inspection districts are changed periodically so that the inspectors get a broad view of the whole city and in this view the commissioners share. The commissioners are also in constant contact with the superintendent, the assistant superintendents, and all the masters. It follows that the Schoolhouse Department often knows more about the needs for school accommodation than the superintendent, and of course much more than the School Committee, and the final good result depends on voluntary co-operation.

The act directs the School Committee to fix the number to be accommodated and then leaves all details in the hands of the Schoolhouse Department. The School Committee may thus determine that classes shall be reduced to 35, and the Schoolhouse Department may determine that they cannot afford to build the many small rooms thus required and proceed to erect (with the consent of the mayor) rooms seating 50. The School Committee may determine to establish classes in printing and bookbinding, and the Schoolhouse Department build only the classrooms required for the number of pupils. There must be co-operation.

Hardly was the act passed before these incongruities presented themselves, and the Schoolhouse Department asked the School Committee to determine, for its guidance, what rooms in addition to classrooms should be provided in a lower, and what in an upper elementary school. Again the successful operation depends upon voluntary but very necessary co-operation.

The act puts the buildings when complete into the control of the School Committee. The School Committee has complete control of the janitor service, and the Schoolhouse Department has nothing to do but to repair the building and make such structural changes as it sees fit. The School Committee may defeat the entire system of ventilation in an effort to reduce the coal consumption, or by ordering fans stopped, and it may allow the building to de-

*These two may differ widely.

teriorate through lack of care. The Schoolhouse Department may defeat the plans of the School Committee for extended use of the building by refusing to provide printing presses, or a stereopticon, or light for some evening drawing classes. Again one is relying on voluntary co-operation.

The Execution of the Work.

The act left to the board to determine how buildings should be built, how architects should be appointed, and limited only the manner of letting contracts. The board decided at once to have no competitions but to appoint architects direct, and to appoint on the basis of past performance. This necessarily ruled out all the younger men who had no past performance to which to refer, the board feeling that it had no right to experiment with the city's money by the employment, on expert work, of an untried man. For many reasons it seemed desirable to distribute the work among many, and although the men thus employed were not equally competent, the system worked to the advantage of the city. A great variety of architects was employed, and there was none who did not contribute something to the information gradually accumulating in the hands of the board; for all work was carefully examined and compared, definite information tending to establish standards was put on record for the board and for the use of the next architect employed. There the new man, coming in to work for the first time for the city, had at his disposal the information accumulated by all his predecessors who had worked for the board. As the field of available men of the first class was covered, those who had made good records were given a second school, and those with a previous good record were sure to add something more of value and perhaps establish a new record for economy in plan and construction.

The records of the board as given in the reports show the establishment of first-class or fireproof construction and a steady decrease in the cost per pupil in the face of a rising market. Thus the Schoolhouse Department, an expert board independent of the School Committee, having exceptional opportunity to study planning and building problems, improved their opportunity and established valuable standards. The figures given in the reports (up to 1909) are valuable chiefly for Boston because they are based on certain definite rules which may or may not be used or applied elsewhere, so although the figures and the fixed cubes and cost per pupil are of value to Boston, their value generally lies in the study that underlies them.

This is briefly what the Schoolhouse Department is and what it has accomplished. It remains to attempt to see what the advantages or disadvantages of the system are.

The Advantages of the Boston System.

The advantages are obvious. A department having to do exclusively with the planning, construction, equipment and maintenance of school buildings must acquire a fund of information that is of the greatest advantage. One may contrast this system with the ordinary one, where each experiment in school building, whether instructive as a good or a bad example, is equally ignored; where the authority is subject to constant changes, and the architects selected one after another, through competition or at random, and with no opportunity to benefit by the mistakes or the successes of their predecessors. Under the Boston system all study is preserved and tabulated at headquarters. This concentration, this continuous

Note—How shall cities select architects for new schoolhouses and how shall the construction of these buildings be controlled? Mr. R. Clipston Sturgis presents Boston's most suggestive reply to this question. The opinions and conclusions of the author are of more than current value because of his service on the Boston Board Schoolhouse Commissioners and of his very wide observations as a schoolhouse architect.

study is a very great gain. The plan is studied for economy of space, the drawings and specifications are studied for economy of material and construction. Different plans and different materials and different methods are tried out, tested, and recorded for future reference.

The study of the building in this detailed way necessarily leads to the study of results; the architect will wish to know if his plan has proved effective in results, the engineer will wish to know if his plant has accomplished what it was planned to do, and the board responsible for all this will be inquiring of the school authorities whether the science laboratories are used to the full limit of the equipment installed, and whether the heating and ventilating plant shows results in improved health of the students. The board that has gone thus far with inquiries is tempted to seek information as to the final result in education and wishes to know not only if the stations in the cooking room are occupied, but if the pupils really learn to cook so as to be of some use in the home, and thus justify the expenditure.

The need for new buildings and the amount of accommodation required will necessarily be tested by a board that has a constant and intimate familiarity with what is going on in all parts of the city; and, in a port like Boston, this board will be inquiring about immigration statistics, or the shifting of centers of population which constantly goes on in a city having a large foreign element. The collection and tabulation of this varied information is all of great value, but much of this is work that lies distinctly within the province of the school authorities, and seems at first glance to be outside the province of the Schoolhouse Department. The truth is that no line can be drawn between two departments so closely related and so inter-dependent.

The Disadvantages.

In Boston, as already indicated, the duties of the two bodies are clearly defined and absolutely separated, and more than that, the funds are separated as well. A single instance may answer to show one of the greatest disadvantages. Boston has crowded tenement districts in which it is more and more difficult to provide school accommodations with even the minimum of light and air and play space. Even the minimum is very costly. A few miles out, land is abundant and cheap. There great open areas could be provided for the schools and the cost of furnishing ideal buildings, with fine playgrounds, would be far less than the cost of land and building in the tenement district. There would be not only a great benefit to the children, but an actual economy to the city, for the saving in land would cover the cost of transportation. The saving, however, would be in the Schoolhouse Department and the expense in the School



WILLIAM LLOYD GARRISON SCHOOL, ROXBURY, BOSTON.
Newhall & Blevins, Architects.

Elementary School for Upper Grades. Cost, \$69,818. Seating capacity, 500 pupils in two classrooms.

Department, and the latter could not meet the expense, nor could the former transfer funds to meet it. This admirable and economical scheme was suggested, but owing to the conditions given above was abandoned.

The disadvantages are all of this kind and all come from a well-meant but unwise separation of two portions of one and the same problem. It is useless for the School Committee to plan improvements in school administration if a body, over whom the School Committee has no control, is entrusted with the duty of furnishing the essentials for putting into practice what the School Committee desires. It is equally useless for the Schoolhouse Department to install an elaborate system of forced ventilation, if the rooms are to be used for an open-air class or the fan is not run. Examples could be given indefinitely, but are needless. The disadvantages are obvious, and if and when the system has worked well in Boston, it has been only because a voluntary co-operation has been sought and obtained.

Possible Remedies.

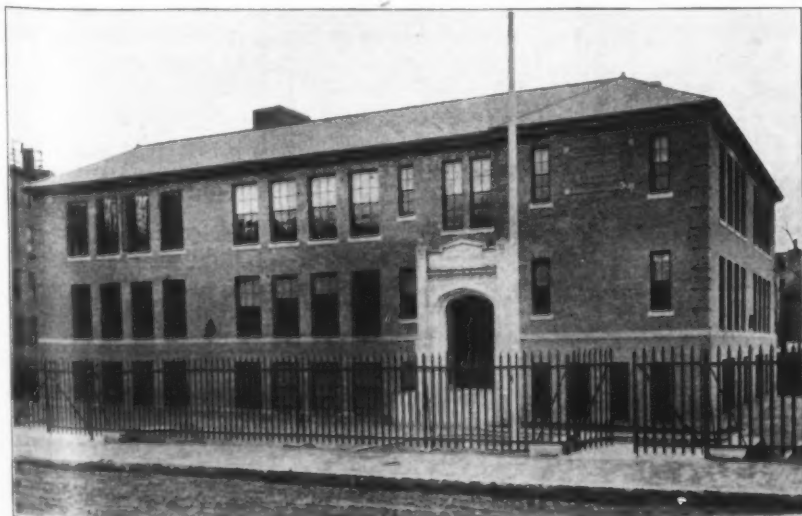
It is of little service to point out defects unless one can give some suggestion as to remedy. In Boston the suggestion comes along the lines of what has already been done. The big School Committee of twenty-four sub-divided its work. Each sub-committee had special duties assigned to it, and then the School Committee as a whole covered a large field with no part of which it was really competent to deal. The present small committee of five cannot pretend to cover the field and therefore leaves all details of management where they rightly belong with the paid

experts—the superintendent and assistants, the secretary, the purchasing agent, etc. The Board of Schoolhouse Commissioners, with their various heads of divisions, architectural, engineering and inspection, are similar experts. The superintendent, the teaching expert, is officially recognized and is present at the meetings of the School Committee; the building expert, in this case a board of three, should be similarly recognized officially and be present at the meetings of the School Committee. Further, all work pertaining to the buildings and their equipment and their care should be under one control. The board which installs a heating plant should be responsible for the purchase of coal, the board which builds and repairs the buildings should be responsible for the care of the building. The janitor service and purchasing should be under the control of the building department.

The School Committee would then be an elected unpaid board, not professionally expert in the schools, and this committee would have at all its deliberations the paid experts who are familiar with the educational and building problems, and who together are almost equally needed to guide the School Committee to right and wise decisions. It might even seem wise to have these experts ex-officio members of the School Committee, with all the rights of the other members.

In smaller communities where the number of buildings to maintain and the number of new buildings, would not justify a permanent force like the Boston board, there should be at least one expert and a permanent headquarters where

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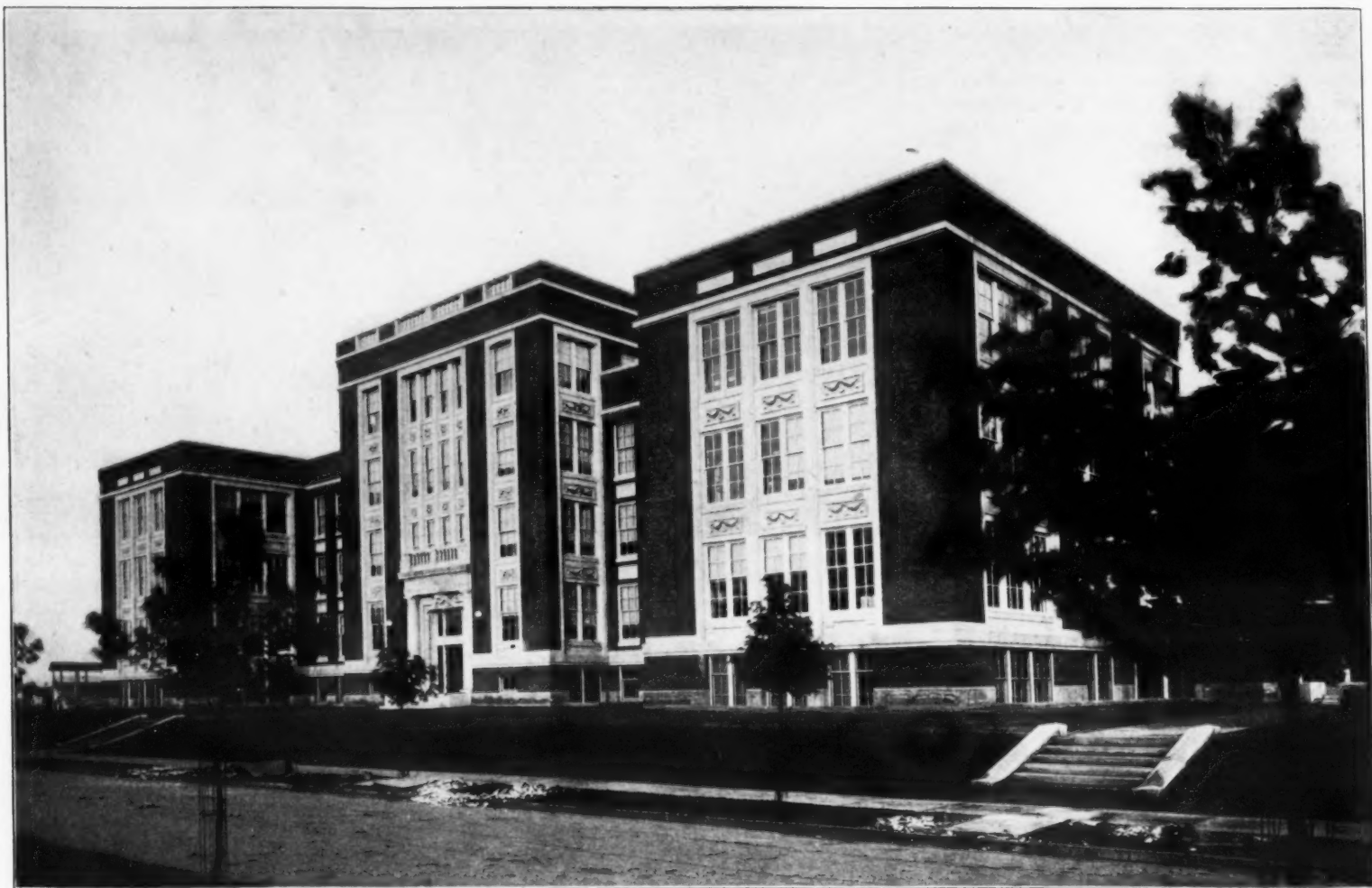


LA FAYETTE ELEMENTARY SCHOOL, BOSTON.



GEO. T. ANGELL SCHOOL, BOSTON.

Typical elementary schools designed by the Architectural Division of the Boston Board of Schoolhouse Commissioners.



WEST TECHNICAL HIGH SCHOOL, CLEVELAND, O. Frank S. Barnum, Architect of the Board of Education.

A TECHNICAL HIGH SCHOOL

The new West Technical High School of Cleveland, in the style of the French Renaissance, is a beautiful structure of dark shale brick, grey stone and terra cotta. The architect, Mr. F. S. Barnum, has succeeded in making this, as is ever essential in a school building, a glass building. The large amount of wall space given to glass, gives ample light without in any way detracting from the appearance of the building.

The general plan of the main part of the building is in the form of the letter E. The ground floor of the building covers about two acres. There are four stories, a basement and sub-basement in the center portion. The other portions of the building are three stories above the basements. The auditorium entrance to building is at the southwest corner. As one enters the center of the building on the first floor are found, to the right, the general and private offices while an exhibition room is on the left. Across the main corridor is the consulting room where teachers may meet pupils and parents.

The corridor running east from the central entrance leads to the general faculty rooms. These are the official home of the faculty. Here are found rest rooms, conversation rooms, and desk room for each teacher. The north wing of the first floor contains the cabinet shops, mill room and finishing room. Drafting rooms and physics lecture room and laboratory are in the corners of the building.

In the basements are the pattern shops, foundry, forge rooms, machine shops, cafe, kitchens, gymnasium, shower rooms, and lockers, electrical construction department and kilns for pottery. Two mechanical drawing rooms and rooms for the heating and ventilating apparatus occupy the remainder of space on this floor.

The library is on the second floor. Grouped around the library are recitation rooms that demand the greatest use of reference books. On

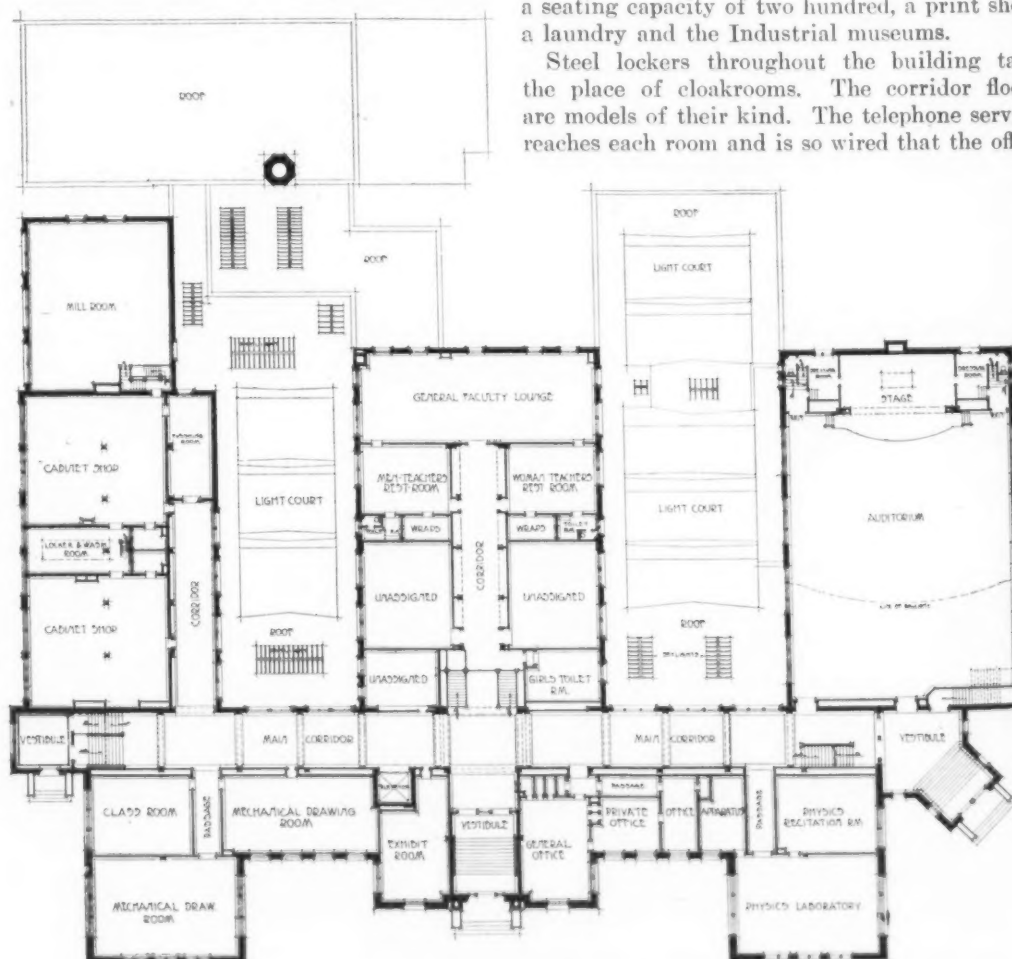
this floor are the English history, German rooms and the study halls. The middle section of the second floor is devoted to dressmaking, millinery, physiology and the girls' hospital.

With the exception of the mathematical rooms, the third floor is largely a laboratory

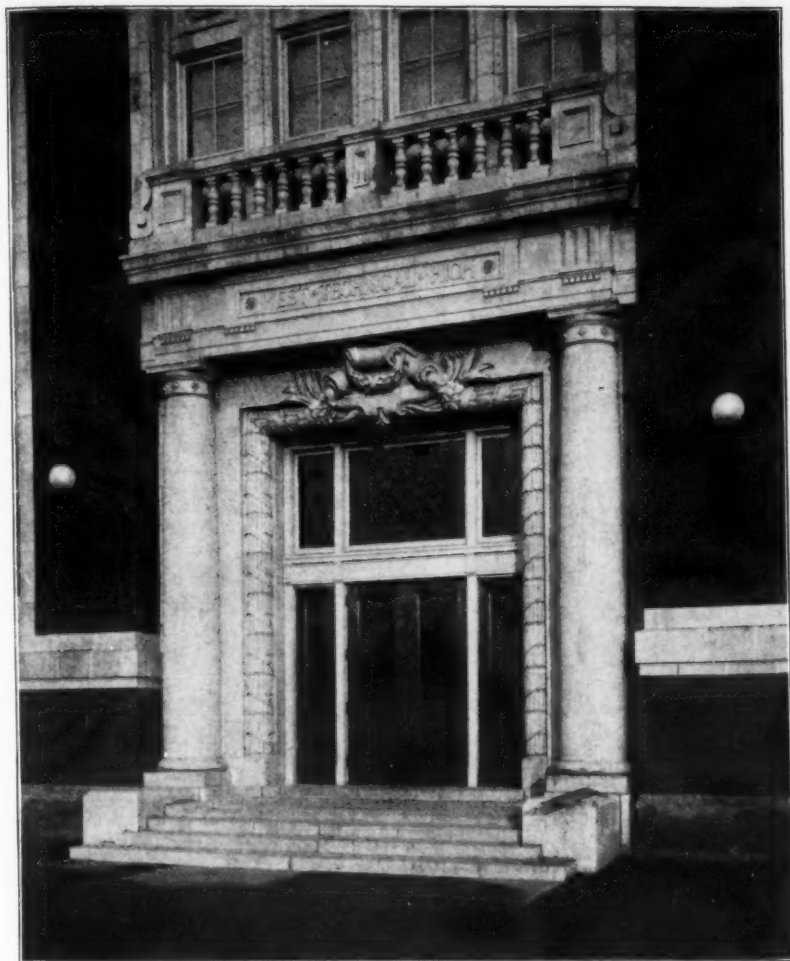
floor; here are two chemical laboratories, a geography laboratory, two art rooms, the pottery and art metal rooms, two kitchens for domestic science, and a suite of rooms where the girls are taught to keep house.

On the fourth floor is a small auditorium with a seating capacity of two hundred, a print shop, a laundry and the Industrial museums.

Steel lockers throughout the building take the place of cloakrooms. The corridor floors are models of their kind. The telephone service reaches each room and is so wired that the office



FIRST FLOOR PLAN, WEST TECHNICAL HIGH SCHOOL, CLEVELAND, OHIO



MAIN ENTRANCE.



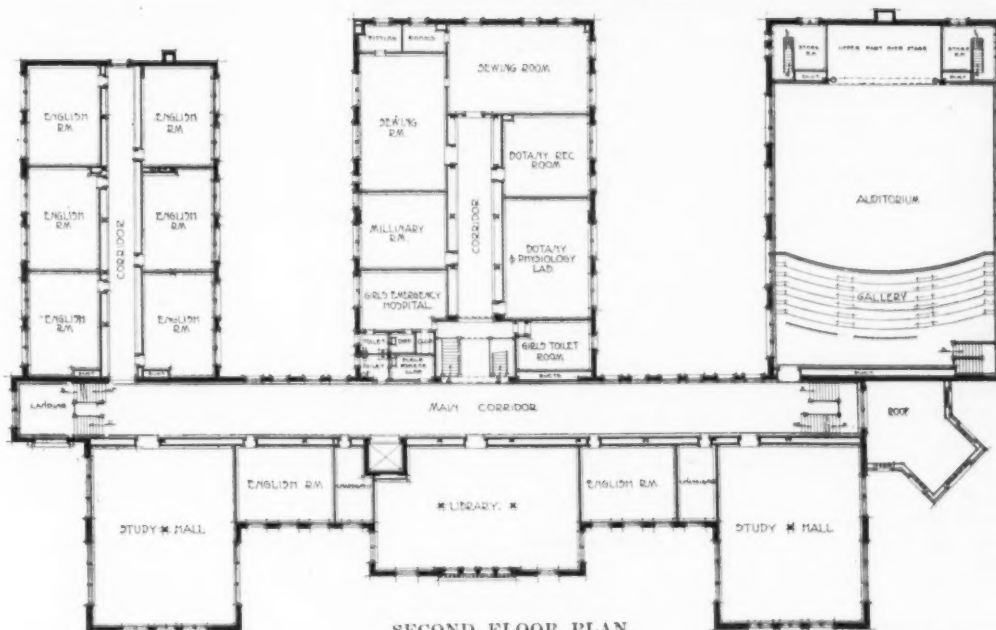
DETAIL OF FRONT.

may communicate with all rooms at one time. A vacuum cleaning system which extends to every part of the building insures a clean school, free from dust. The boiler room contains a plant with a capacity of six hundred horse power. A complete light and power plant is installed. The fans deliver 171,000 cubic feet of air per minute, this fresh air being so distributed that each pupil is supplied with 54 cubic feet of fresh air per minute. This exceeds the hospital requirement of 50 cubic feet per minute. The air is moistened after being heated so that the proper amount of humidity is maintained. Foul air is taken out by a separate set of exhaust fans.

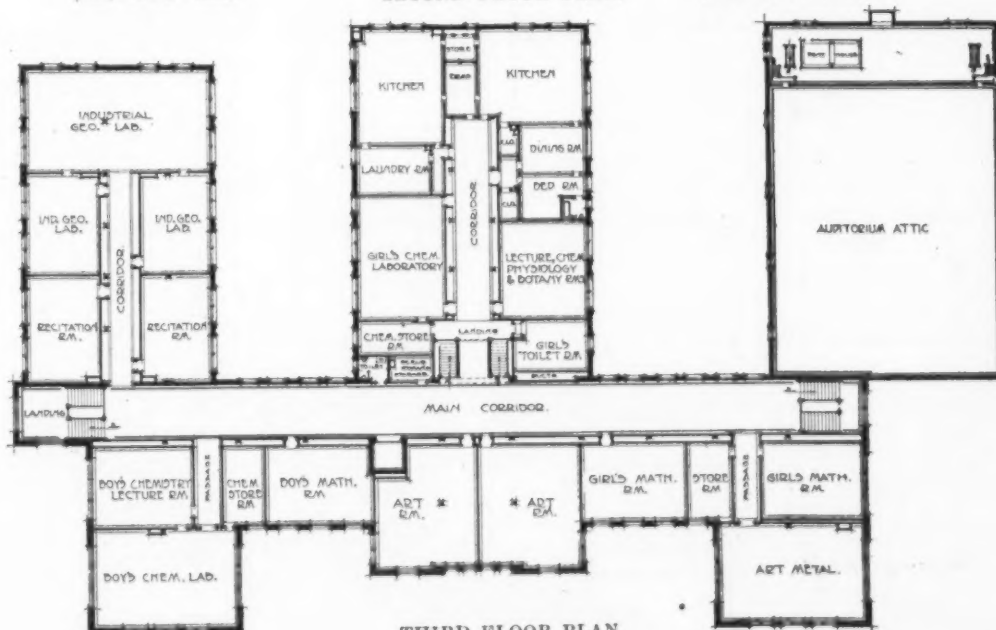
Equipment.

The building is equipped for 1,000 pupils. Each shop will care for twenty-eight at a time. The pattern shops each contain 28 benches, 6 lathes, a grinder and band saw, with the necessary small tools. In the foundry is a two-ton cupola, a modern brass furnace, a core oven and a tumbling barrel. There are 28 individual benches and a set of tools for each. The forge room has 29 modern down-draft forges, a tempering furnace and a power hammer for illustrating drop forging, also power shears, hack saws, emery wheels and drills. The mill room is equipped with the most modern and powerful machinery to re-saw and prepare the lumber for use in the various shops. In the machine shops is modern heavy machinery for iron and steel work. Here are found the most approved types of lathes, shapers, planers, milling machines, grinders, drills and screw machines that are needed in modern manufacture. The drafting rooms are models of their kind, each pupil having his individual instruments which belong to the school. The lighting is indirect and of the most approved type. The electrical construction department is fitted up with 28 miniature rooms with complete equipment in which classes may work out the various problems assigned to them. The physics laboratory is planned for practical work in physics and is thoroughly equipped for the study of machines

(Continued on Page 56)



SECOND FLOOR PLAN.



THIRD FLOOR PLAN.

THE ORVILLE BEACH MANUAL TRAINING BUILDING.

The city of Oshkosh, Wis., is the fortunate recipient of a manual training school through the bequest of a public-minded citizen, the late Mrs. Helen Beach. The school houses the entire manual training department for the city, and also a day and evening trade school and a continuation school. It is a memorial to the late Orville Beach, one of the early pioneers and important business men of the city.

The building is classic in design and is built in the form of the letter "T". The front width is 84 feet and the rear width is 114 feet, 4 inches; the total length is 120 feet, 4 inches. The building is two stories in height and has a basement set so high as to allow full windows above the level of the surrounding site. The total floor area of each story is 9,952 square feet.

The ground floor or basement contains a machine shop, a room for manual arts, a laundry, and the mill and lumber room. A foundry is located in an extension to the rear so arranged that the heat and odors will not penetrate into the main building and that the dangers of fire will be absolutely removed.

The first floor contains two woodworking shops, two sewing rooms, a classroom, a small store room, a room for finishing wood products, a lecture room, an office for the principal and a number of storage rooms for blue prints, tools and other materials.

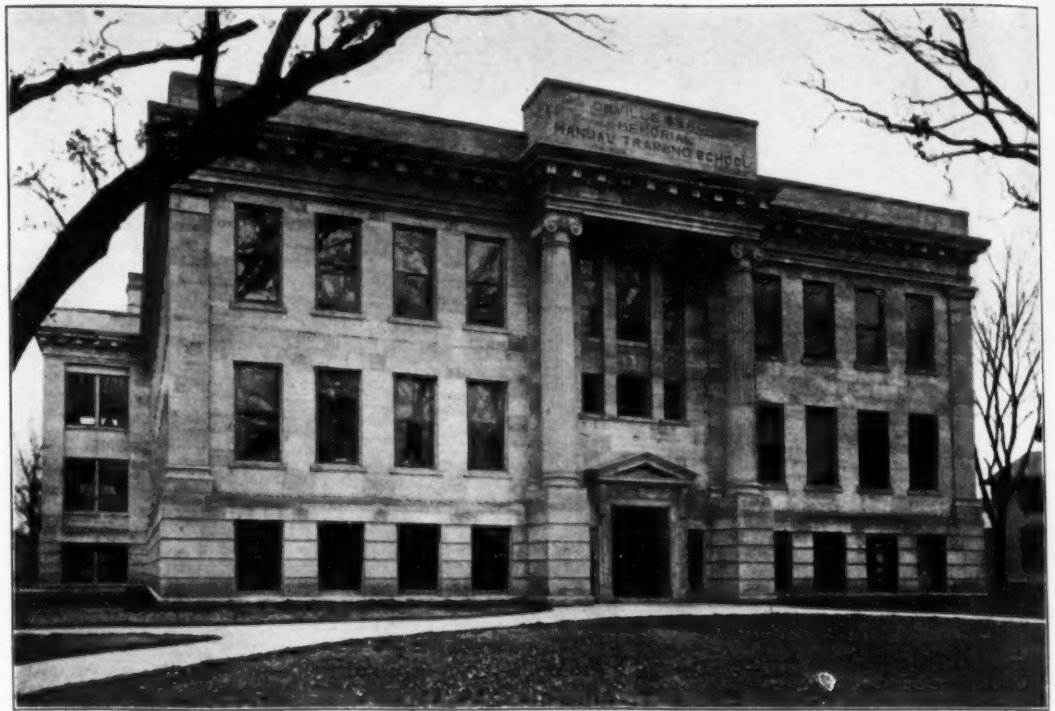
On the second floor are located two large rooms for mechanical drawing, a room for free-hand drawing, two large kitchens each adjoining pantry and store rooms, a model housekeeping suite, and an office for the director of domestic science.

The building has been very liberally equipped with cloak and dressing rooms and lavatories. The plumbing is all of the best approved type and has been especially chosen to withstand the heavy duty to which it will be subjected.

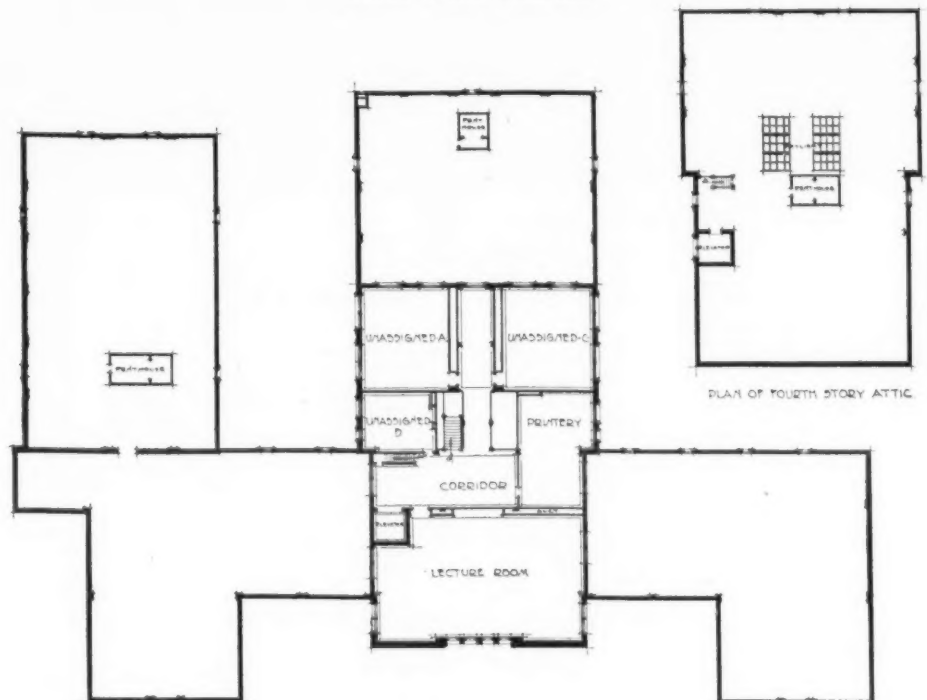
The building is heated with steam and is equipped for fan-blast ventilation. The heating plant is in a separate building.

The total cost of the building, with grounds and equipment, is practically \$100,000. There is also an endowment fund of \$100,000, the proceeds of which are applied to the conduct of classes.

The school at present accommodates all of the manual training classes for the high school, and all the grade schools of the city; also for the parochial schools. It has a principal in charge who also acts as principal of the industrial school and of the continuation classes.

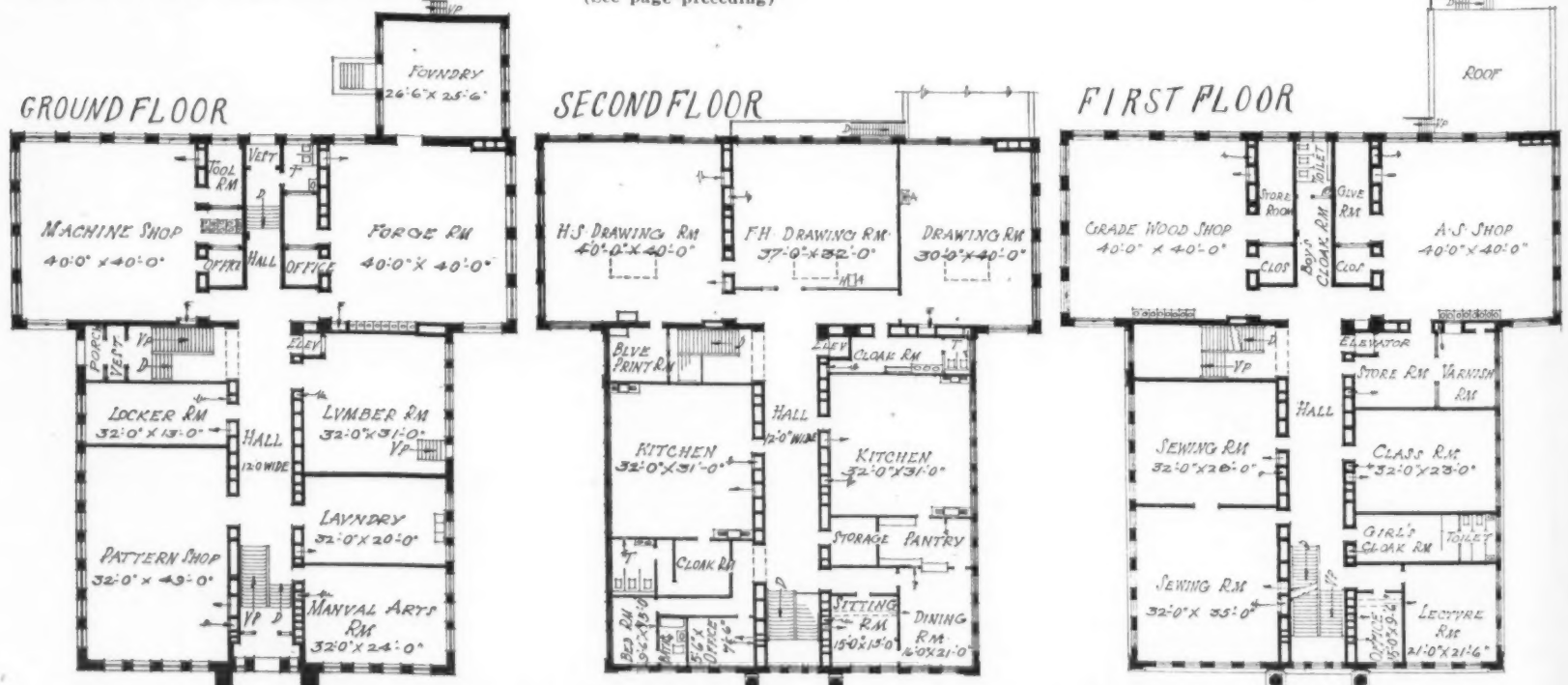


ORVILLE BEACH MANUAL TRAINING SCHOOL, OSHKOSH, WIS.
William Waters, Architect.



FOURTH FLOOR PLAN, WEST TECHNICAL HIGH SCHOOL

(See page preceding)



FLOOR PLANS, ORVILLE BEACH MANUAL TRAINING SCHOOL, OSHKOSH, WIS.



SHETTLESTON PRIMARY SCHOOL.

PRIMARY SCHOOLS IN SCOTLAND

By JOHN Y. DUNLOP, Craighead, Tollcross, Scotland

It was the Education Act of 1870 which inaugurated the new era in school building in Scotland. Before then the requirements had been simple and had been met by hap-hazard arrangement.

From that time however, all the conditions of school life were scientifically studied and the new requirements imposed new conditions of design which it was not always easy to turn to satisfactory architectural account.

But the problems involved are at least stimulating, and in many cases, especially in the buildings designed for city areas, have led to an adaptation of a fairly elastic phase of foreign Renaissance architecture which has proved wholly satisfactory.

The conditions under which education is carried on at present in Scotland under the Board of Education are as follows: A sum of money is annually granted by Parliament for public education. The object of this grant is to aid and maintaining

(a) Public elementary schools (primary schools).

(b) Secondary schools (normal schools).

The schools are managed by school boards who have the control of all schools provided by them.

The curriculum consists of English, including reading, writing, composition and grammar in so far as it bears on the correct use of the language; arithmetic; drawing from common objects for boys and girls; needlework for girls; mechanical drawing and handwork for boys; lessons on geography, history and common things; singing and physical exercises.

The following subjects are taught when the circumstances of the school, in the opinion of the inspector make it desirable: Mathematics, science, practical geography, cookery, laundry and household management.

Development of Present Schools.

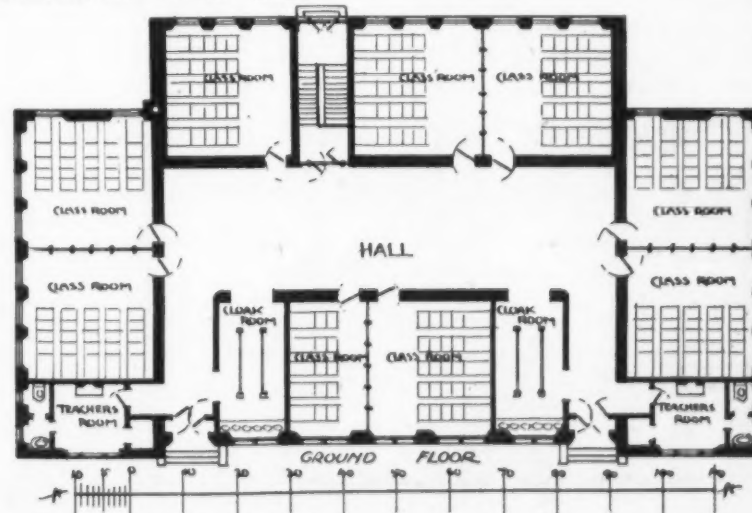
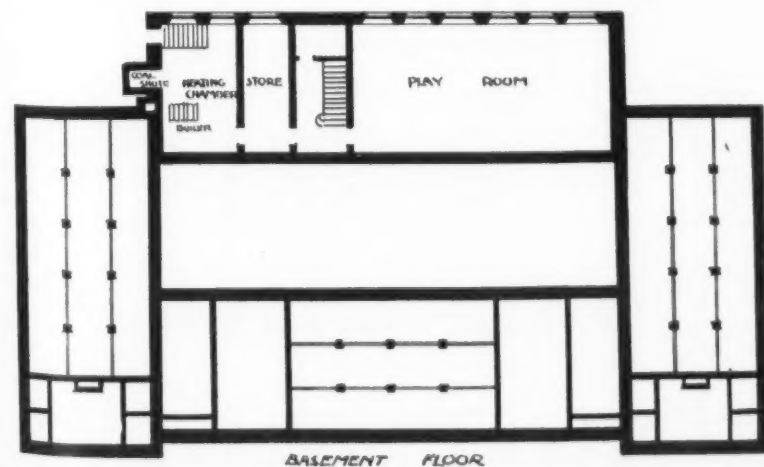
In considering the modern type of Primary school in this country it may be of interest to refer briefly to the various steps which have led to the adoption of the present form of building. The earlier edition of the code which contained the schedule of instructions to architects on school building contained only general suggestions among which was the following advice: "The school architect is recommended first to perfect his plan. His skill should then enable

him to clothe it with form, proportion, character, and color."

This is an excellent recommendation. Unfortunately, it was difficult to know when the first part had been fully complied with and who was to guide the authorities in choosing the design.

The first impulse toward modern development of educational architecture was no doubt due to the ideas of our early educationalists, whose main object by that time was to induce the children to think and to acquire knowledge for themselves instead of being told. These men knew what was needed so that a complete supervision of work could be had at all times, and their idea, at that time, was to have one large schoolroom at the one end of which was arranged a gallery large enough to accommodate two-thirds of the children.

The open floor space was about twice the area of the gallery; two long desks were arranged at each side of the entrance to accommodate the children who were drafted on for their writing lesson to the gallery and at the opposite end of the room from the gallery were one or two small classrooms for senior children. This arrangement was adhered to throughout Scotland although of course, various modifications were made.



FLOOR PLANS, SHETTLESTON PRIMARY SCHOOL. John Y. Dunlop, Architect.



INFANT CLASSROOM, SHETTLESTON PRIMARY SCHOOL



HALL, SHETTLESTON PRIMARY SCHOOL.

Present Day Practice.

At the present time, the school architect is supplied with a very complete set of rules for planning which have passed through the experimental stage and have become firmly established. These rules admit no exceptions, the Board of Education insisting that the same proportion of window space in each classroom be required whether the outlook is in a narrow street or on to unbroken space, or whether the aspect is north or south. The result is that in many cases there is externally an undue diminution of wall space valuable for architectural effects and internally an excess of light which is almost intolerable.

The size of schools in Scotland varies considerably for the reason that the Board of Education has no fixed rule beyond the proportion of infants to other pupils.

Some school boards have come to the conclusion that no school should contain more than 1548 children in one building, that is three departments of 516. There are however, to be found in some of the large towns, schools which contain a greater number than this.

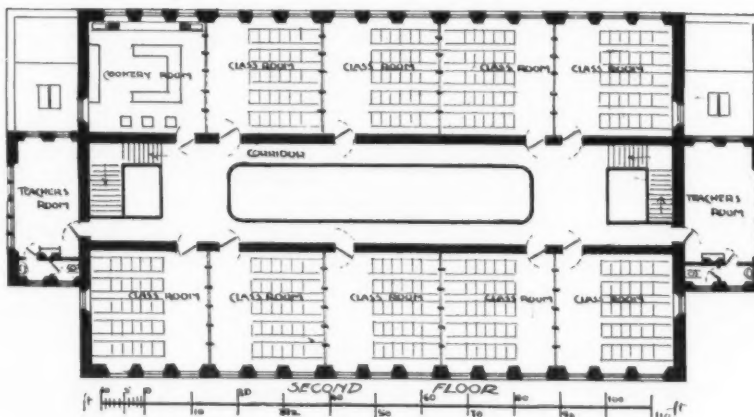
Excepting on the grounds of increased risks of contagion in case of infectious illnesses, there seems little harm in those large schools, providing the buildings have been well planned.

One point in school design in which the most school boards in Scotland agree, is that the less number of stories in a school building the better. It is only when the exigencies of size and the effort to supply good playgrounds make it essential that they erect the type of building which consists of three stories corresponding to the three departments.

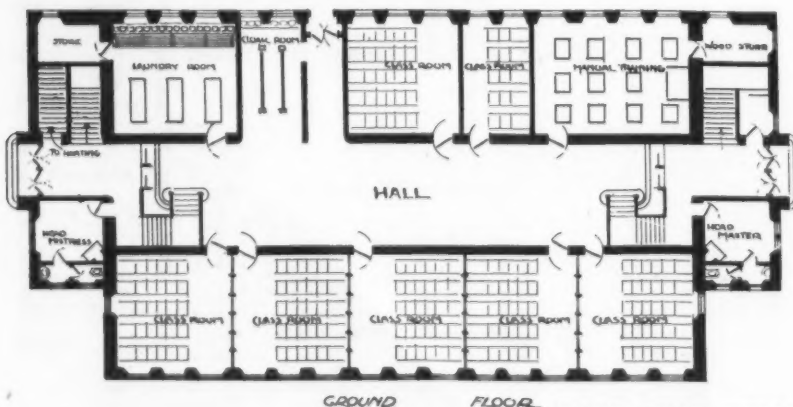
The planning of the classrooms is generally arranged round a central hall and the floor area is on a basis of ten (10) square feet per child.

Shettleston Primary School.

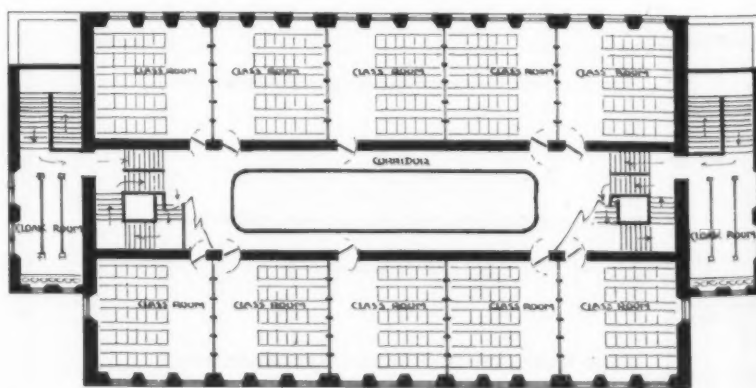
This school which has been quite recently erected is an example of economical arrangement and planning so as to maintain an easy and effective discipline. The building is built of red sandstone and is slated with local slates.

WELLSHOT PRIMARY SCHOOL.
James Lindsay, Architect, Glasgow, Scotland.

SECOND FLOOR PLAN, WELLSHOT PRIMARY SCHOOL.



GROUND FLOOR



FIRST FLOOR

FLOOR PLAN, WELLSHOT PRIMARY SCHOOL.

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On the basement floor is the playroom which has a clear-ceiling height of ten feet. This room is finished in Portland cement on the wall and plaster ceiling, all steel beams being exposed and finished with paint.

The classrooms on the ground floor each seat fifty pupils excepting one in the front which is designed for thirty places. In each case the rooms are arranged in pairs, being divided with folding partitions.

The interior woodwork is pitch pine floor; pitch pine dado which is stained a cast of green and varnished three coats copal varnish.

In the central hall the floor is of dolomene laid in buff and formed into panels with chocolate bands and edgings, while next the wall the floor is formed with a cavetto internal angle which receives the wall tiles. The upper part of the walls and the camp ceiling is finished in plaster while the lower part for a height of four feet, six inches, is covered with glazed tiles.

The design of the wall dado is simple chocolate base, to match the edging of the floor, three feet of cream-white tiling, a draper band in green, a three inch cream-white strip and the whole surmounted with a moulded green band two inches deep.

The sanitary arrangement is the best of the school type.

Heating is by the low-pressure system of hot water. The sectional boiler is fixed in the heating chamber and from the top two "flow" main pipes are taken, one to form a heating section for the playroom, and the other to form the radiating surfaces to heat the classrooms on the ground floor.

A return main is brought back to the boiler for each section, falling throughout its entire length until it is connected.

Two-column radiators are adopted for the heating of the hall and open fires are in use in the teachers' room. Natural ventilation is adopted throughout which by a combination of direct and indirect heating works very well.

The cost of the building was £4730* which includes the heating, ventilation, plumbing and furnishing. Figured on a unit basis the cost was £11 2/4 per pupil.

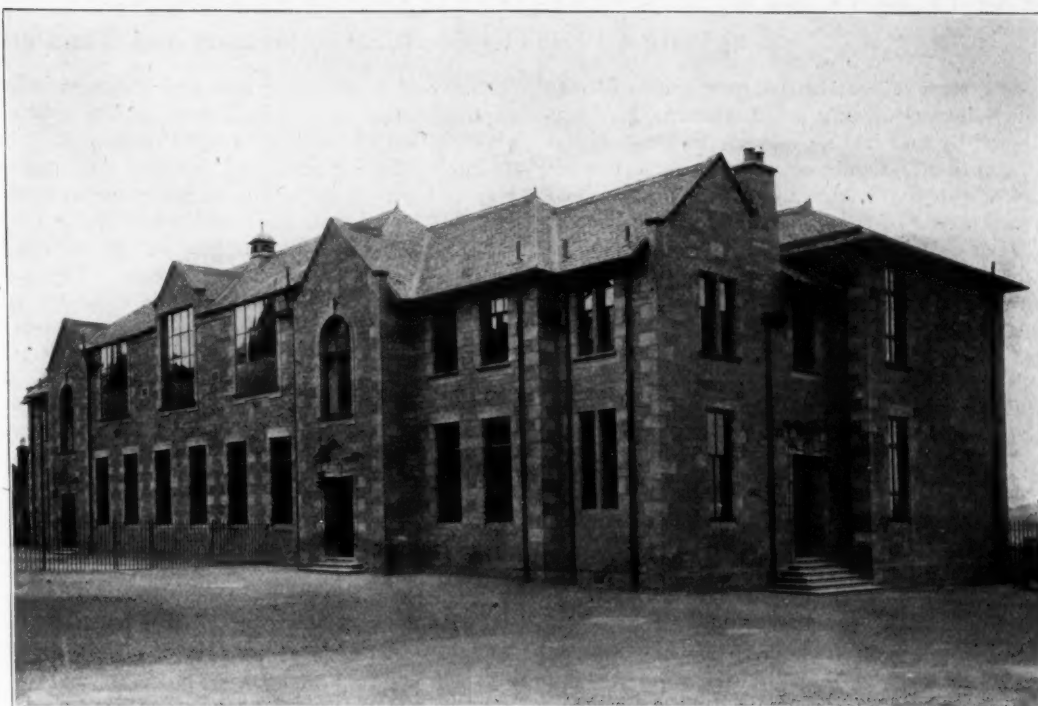
Eastbank Primary School.

The new school at Eastbank, in Lanarkshire, Scotland, is an embodiment of the latest development in primary school construction. The external walls are built of Locharbriggs sandstone and the roofs, which are projecting, are covered with slates having close slated roll pi-ends.

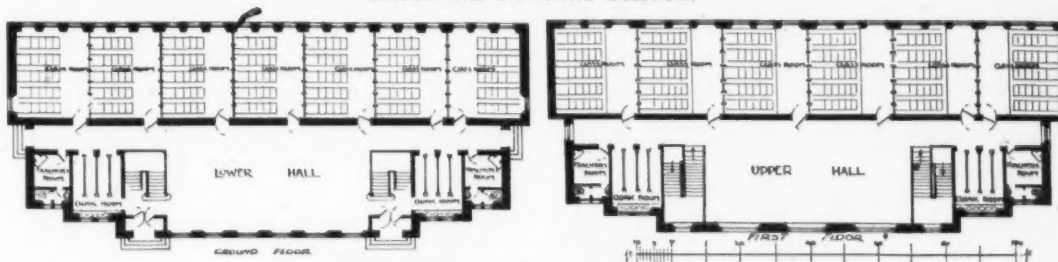
In planning the building the architect has shown complete knowledge of the organization and the complete routine of this kind of school,

*Approximately \$23,650.

†Approximately \$55.50.



EASTBANK PRIMARY SCHOOL.



FLOOR PLANS, EASTBANK PRIMARY SCHOOL.

James McKissack & Sons, Architects, Glasgow.

the arrangement being such that the master will be able at all times to maintain an easy and effective discipline.

The heating chamber is in the basement which is fireproof, being built with brick and having a concrete floor and ceiling.

In the ground floor are the several classrooms each designed to accommodate fifty children seated at dual desks. The rooms are each furnished with a large movable cupboard on castors, table with two drawers, teachers' desk, chair, fixed and movable blackboard, and also with a specially designed attendance board on which the attendance of the class is recorded, morning and afternoon.

The finish of the room is very simple the dado being finished in keens' cement and enameled. The walls and ceiling are of plaster, painted with Curesco, the ceiling and frieze being white and the walls a neutral tint.

All the internal angles in the room are finished with circle coves, a specially moulded runner being fixed at the junction of the floor and wall dado, the other cavettos being in plaster.

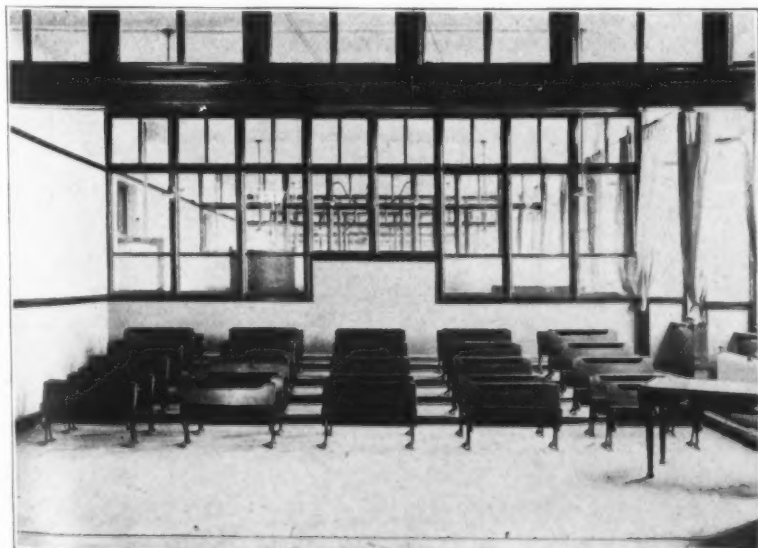
ished with circle coves, a specially moulded runner being fixed at the junction of the floor and wall dado, the other cavettos being in plaster.

The ventilation of each classroom is by the windows which have been designed in three compartments. The upper portion being center-hung on the jambs of the frame. The middle part is center-hung vertically with the results that the incoming air can be shot forward in either direction into the room and the upper part arranged so as to act as the outlet. The whole windows are wrought mechanically and each is controlled separately.

In this school the whole of the classroom windows face the south and to shade off that excess of light which is sometimes almost intolerable, linen curtains are used.

In the hall which is arranged conveniently to the classroom the floor is of wood and the same details of finish are carried out as in the

(Continued on Page 58)



CLASSROOM, EASTBANK PRIMARY SCHOOL.



CLOAKROOM, EASTBANK PRIMARY SCHOOL.

Downward Ventilation in a Rockford, Ill., Schoolhouse

By CLINTON E. BEERY, Heating and Ventilating Engineer

The system of heating and ventilation for the Hall School Building at Rockford, Ill., was designed by and installed under the supervision of the author last summer, and has been in operation since the beginning of the last school year. In view of the generally accepted theories of heating and of the revolutionary tendencies in the method designed by the author, together with what appears on first thought to be a *freaky* arrangement, he desires to make a brief explanation. It is his belief that a few explanatory words will help to convey a clearer understanding of the theory on which this method, which will be referred to hereinafter as the new method, operates. Incidentally, he has applied for a patent on the system.

The author's experience, based for the most part on practice and observation, has impressed him with the importance of saving, if possible the great heat losses frequently found in fan-blast heating and ventilation, which seemed not only a waste, but actually a handicap to good results. With the knowledge that air of lower temperature and greater density always finds a position at the floor, and that higher temperatures prevail at the ceiling, he reasoned that, if the temperature near the ceiling could be controlled by some means other than the ventilating apparatus, the air customarily at a high temperature at or near the ceiling could be held to a minimum difference in temperature between the floor and the ceiling, and in this way a beneficial influence could be produced on the results obtained from the ventilating apparatus.

With this as a basis for his theory he arranged, on January 3, 1912, a regular schoolroom, referred to hereafter as room No. 3, for experimental work to demonstrate his theory. Several other rooms in the building were operating as in general practice. This was the first season for the heating and ventilating system, and it was giving good results.

Room No. 3, which is in the northwest corner of the first floor, is the coldest room in the building. Room No. 8 is on the second floor, directly over room No. 3, and is an exact duplicate of it. Each of these rooms is 26 ft. by 31 ft., with ceilings 13 ft. 6 in. high. Each has 100 sq. ft. of glass exposure facing the west, and 50 sq. ft. of glass exposure facing the north. All windows are protected with wood grooved weather strips.

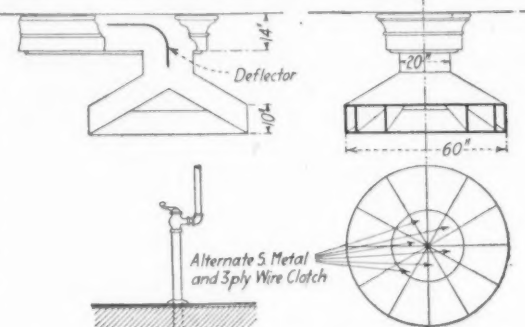
Note—No single problem of schoolhouse sanitation has been the subject of so much experimentation and discussion as that of ventilation. A most novel contribution to our present-day practice has been made by an Illinois engineer. His description of the successful working out of his theories, as prepared for the American Society of Heating and Ventilating Engineers is here presented.

These two rooms were operated the remainder of the heating season, and more or less careful observations were made of their condition.

During the early part of January a comparative test was made of the temperature in room No. 3 (the new method) and room No. 8 (the regulation method), with 60 sq. ft. of wall radiation in the northwest corner. The air delivery in the rooms was 1,544 to 1,560 cu. ft. per minute, measured at the exits. Twelve temperature readings were taken at five minute intervals in each corner of both rooms. Twelve readings of the temperature of the entering air were also taken at five minute intervals. The outside temperature at the time of the first reading was (-2° F) two degrees below zero, Fahrenheit, and at the time of the last reading (-3° F) three degrees below zero, Fahrenheit. An extremely cold west wind, estimated at 18 to 20 miles per hour, was blowing. The maximum and minimum temperature, Fahrenheit, of the twelve readings taken are given in the accompanying Table I:

Table I—Maximum and Minimum of Room Temperatures during Comparative Tests.

Room Number.	Northwest corner.	Northeast corner.	Southeast corner.	Southwest corner.
3.....	70-67	71-70	70-68	69-67
8.....	83-80	70-68	69-66	69-64



4. DETAILS OF AIR DIFFUSER AND VALVE CONNECTION TO CEILING COIL.

The temperature of the entering air as per twelve readings, expressed in degrees Fahrenheit, at five minute intervals, are given in the accompanying Table II:

Table II—Temperature of Entering Air During Test.

Readings.	1	2	3	4	5	6	7	8	9	10	11	12
Room No. 3.....	74	70	72	73	70	73	70	71	73	70	73	69
Room No. 8.....	68	76	100	76	98	72	80	94	68	97	65	83

A simple device for humidifying is located between the tempering stacks and the fan inlet, and is controlled by a humidostat, which is in a part of the building isolated from any influence or conditions in rooms Nos. 3 and 8. The relative humidity readings in room No. 3 showed 63 per cent, and in room No. 8, 54 per cent.

Observations of the relative time required to heat room No. 3 and room No. 8 to 68 deg. F. were taken, with heat turned on, at 7:30 o'clock, A. M.

From the accompanying Table III, giving the data compiled from these observations, it will be seen there was a margin of 35 minutes in favor of room No. 3.

Table III—Record of Observations on Heating Rooms to 68 Deg. F.

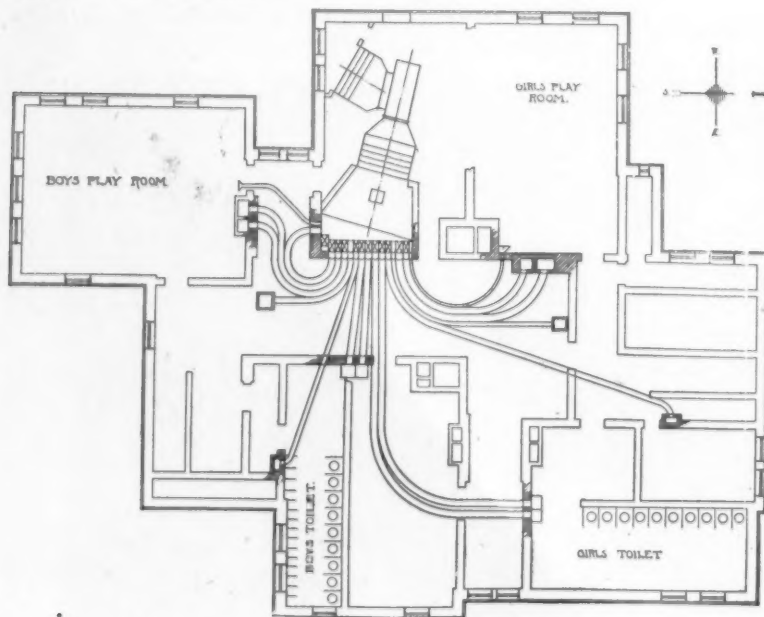
Room	Initial Temp. Deg. F.	Rise, Deg. F.	Time, a. m.	Time Required.
Room No. 3.....	38	30	8:50 a. m.	1 hr. 20 min.
Room No. 8.....	42	26	9:25 a. m.	1 hr. 55 min.

No difficulty was encountered in operating room No. 3 with the same apparatus while meeting the requirements of the remainder of the building. With the encouraging results obtained the Hall School was equipped throughout, during the summer of 1912, with the new method, and has been in operation since September 1, 1912.

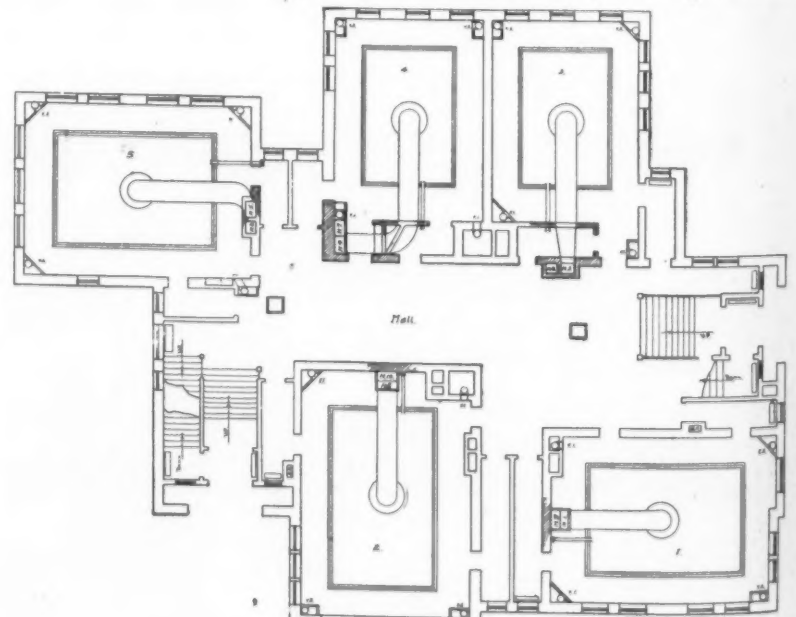
The Hall School building is of brick, with wood-floor construction, two stories in height, with a full basement. It contains five regular schoolrooms on each of the two floors, with wardrobes, recitation rooms, a principal's office, and corridors. The contents above the basement comprise 124,500 cubic feet. The building has a pitched roof, with asbestos slate covering. One room in the basement is used for the mechanical equipment. The power-house is isolated and constructed mostly below grade. It communicates with the mechanical equipment room in the basement by a concrete tunnel 4 ft. wide, 6 ft. 6 in. high, and 17 ft. long.

The mechanical equipment comprises a multi-vane No. 13 fan, directly connected to a side crank engine, and operates at 174 revolutions per minute. All radiation and the blast coils are operated on a system of vacuum heating. Johnson temperature regulation with intermediate control is used in each room. All galvanized ducts from the plenum chamber are of regulation design, with the exception of having been run to points where it was possible to take air delivery into the rooms from the front end of the same.

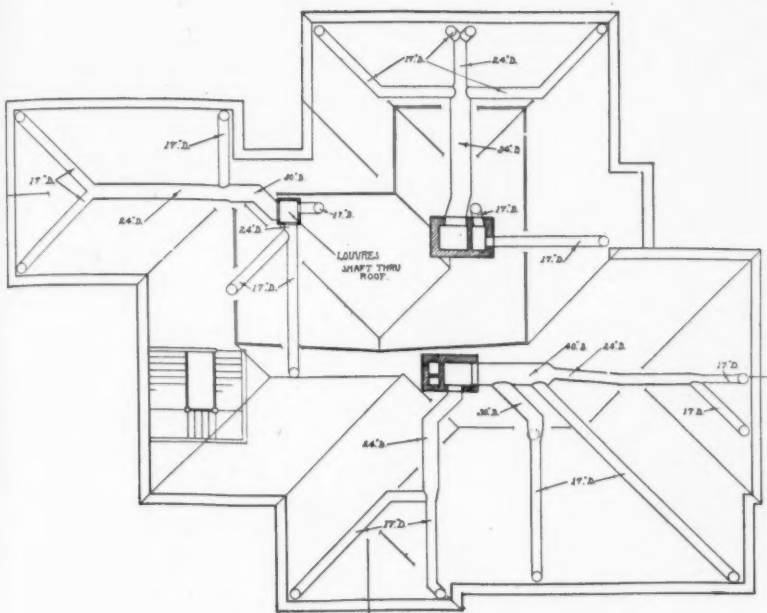
Each of the ten schoolrooms is equipped as follows: coil consisting of about three 1-in. pipes extends entirely around the room approximately five feet from the exposed walls and six feet from the inside walls. These pipes are suspended by special hangers 20 in. below the ceiling, as shown in an accompanying illustration. These coils are supplied individually by a 1 1/2-in. riser from the main in the basement. The riser is equipped with a modulation valve about 34 in. above the floor, which gives it a



1. BASEMENT PLAN, HALL SCHOOL, ROCKFORD, ILL.



2. FIRST FLOOR PLAN, HALL SCHOOL, ROCKFORD, ILL.



3. ATTIC PLAN, HALL SCHOOL.



5. CLASSROOM DURING STEAM TEST, SHOWING UNIFORM DOWNWARD DISTRIBUTION.

slight offset. A single return takes care of the two coils in series from the first and second floors, respectively.

A galvanized-iron duct, 14x28 in., extends from the connection with the flues from the basement to a point central over the seating section of the room, from which the air is delivered to the room through an especially constructed diffuser, which breaks the velocity and directs the fresh air out in all directions over the breathing zone. This diffuser is located at a height to admit the air for ventilation to the room just below the stratum of the air at the ceiling, which is holding a uniform density by contact with the direct radiation.

The foul-air exits on the first floor are at the floor line in the four corners of the rooms, and are faced with sheet metal frames and louvers, as shown in an accompanying illustration. The air discharges through these into vertical galvanized pipes, 12 in. in diameter, which extend upward through the second floor.

The foul-air exits on the second floor are located the same as on the lower floor, and connect with the foul-air, 12-in. round pipes from below, increased to 17 in. in diameter. These vent pipes lead to the attic, where they are gathered in groups, and discharge to the outer atmosphere. The sizes of these vent pipes were simply increased by multiples of the cross sectional area, the increase of resistance being relied on in the use of this method to maintain a sufficient static pressure in the rooms. All

galvanized vent pipes below the attic are lathed and plastered on the outside. Only the exit frames are visible.

The principles on which this new method of heating and ventilating operates are as follows:

The direct radiation at the ceiling is the real vanguard of the heating agent for the room. The greater percentage of heat loss is prevented by close contact with the part of the room which is most difficult to control, and is kept down to the minimum of difference in temperature between the floor and the ceiling. A warm-air stratum at the ceiling remains uniform in temperature and density. This influences the temperature of the room below without the air descending to the floor. The air for ventilation is previously warmed by stacks in the basement, and enters the room through the diffuser, just below the warmer stratum of air at the ceiling, and is always of slightly lower temperature than the air at the ceiling. This leaves a narrow range for variation in temperature of ventilating air to complete further the fine art of temperature control.

The air for ventilation is directed over the floor area of the room and is increasing in density at the moment of discharge, with the result that it falls to the floor as the forces of mechanical energy are exhausted. On arriving at the breathing zone, gravity plus static pressure forces the air out of the room at the floor line, producing a movement of air downward

at a velocity of approximately 2 ft. per minute, with positive absence of lateral drafts or air currents. This condition is not disturbed until below the top of the exits, and even then there is no noticeable air movement over the floor, due to the comparatively small exits drawing on a large volume. Each vent screen contains 1.1 sq. ft. clear area, which equals 4.4 sq. ft. for each room.

The accompanying Table IV gives the velocity and delivery records of all exits for ten 1-min. readings, taken after the system was put in operation.

Table IV—Records of Velocities and Deliveries at Various Exits.

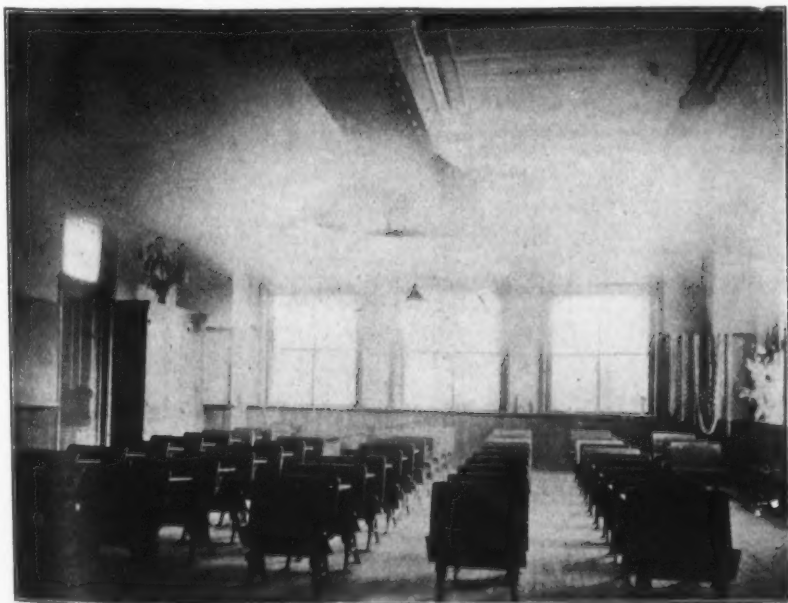
Room No.	North-west exit.	North-east exit.	South-east exit.	South-west exit.	Total delivery cu. ft., per minute.
1.....	270	384	326	400	1,518
2.....	390	394	396	350	1,683
3.....	390	400	450	314	1,700
4.....	332	354	400	446	1,751
5.....	364	360	334	332	1,529
6.....	336	346	345	342	1,506
7.....	352	406	334	350	1,596
8.....	434	428	448	366	1,843
9.....	344	328	356	384	1,553
10.....	412	336	370	282	1,590

The following is a summary of observations made while this system has been in operation: A temperature of 85 deg. at the ceiling has been found to be sufficient as a maximum.

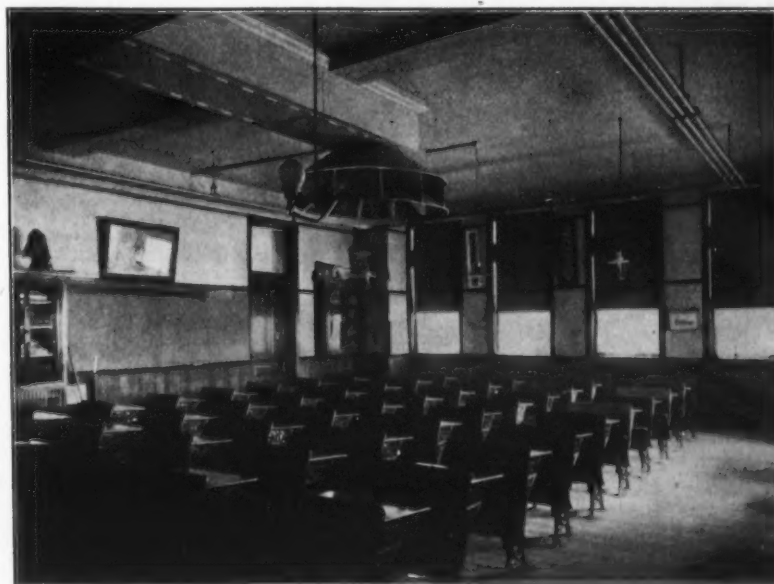
The temperature is controlled within a range of 1 deg., F., in all parts of the room throughout the breathing zone.

Air never enters the room above 73 to 74 deg., F.

(Continued on Page 59)



6. CLASSROOM 20 SECONDS AFTER STEAM WAS TURNED INTO FRESH AIR DUCT.



GENERAL VIEW OF CLASSROOM EQUIPPED WITH DIFFUSER.

A MODEL CENTRALIZED SCHOOL.

The movement for the centralization of country schools has brought with it the problem of planning and building schoolhouses which shall meet the needs of the larger number of children brought together by the abandonment of a number of one-room schools.

The most difficult problem is, of course, that of funds, and designers of centralized schools have invariably been obliged to plan and construct schools which are of the simplest and most economical type.

The new Jackson Township School, in Pickaway County, Ohio, completed last fall, is a good type of the centralized school which not only houses a complete consolidated school organization, but which is also a community center for a large and populous township. The building contains eight standard classrooms, each large enough to seat forty pupils. The rooms each have adjoining them a cloakroom. They are lighted from one side only and are furnished with a standard type of school furniture.

In the basement there is an auditorium 32 by 47 feet in size, large enough to seat 250 persons. It is used for school assemblies and for lectures and neighborhood meetings. It has in addition to the regular entrances from the stairways, two outside entrances, so that it may be used independently of the rest of the building.

The basement also contains a boiler room and a pump room in which is located the machinery for supplying the drinking water and the water used for the boilers, toilets, etc.

The sanitary equipment is of the best and most modern type. The heating apparatus consists of a steam boiler supplying direct heat to each classroom and furnishing steam for the natural ventilation system. The toilets, which are in the basement, are of the best school type, supplied with water from driven wells. Sanitary drinking fountains are placed on the different floors.

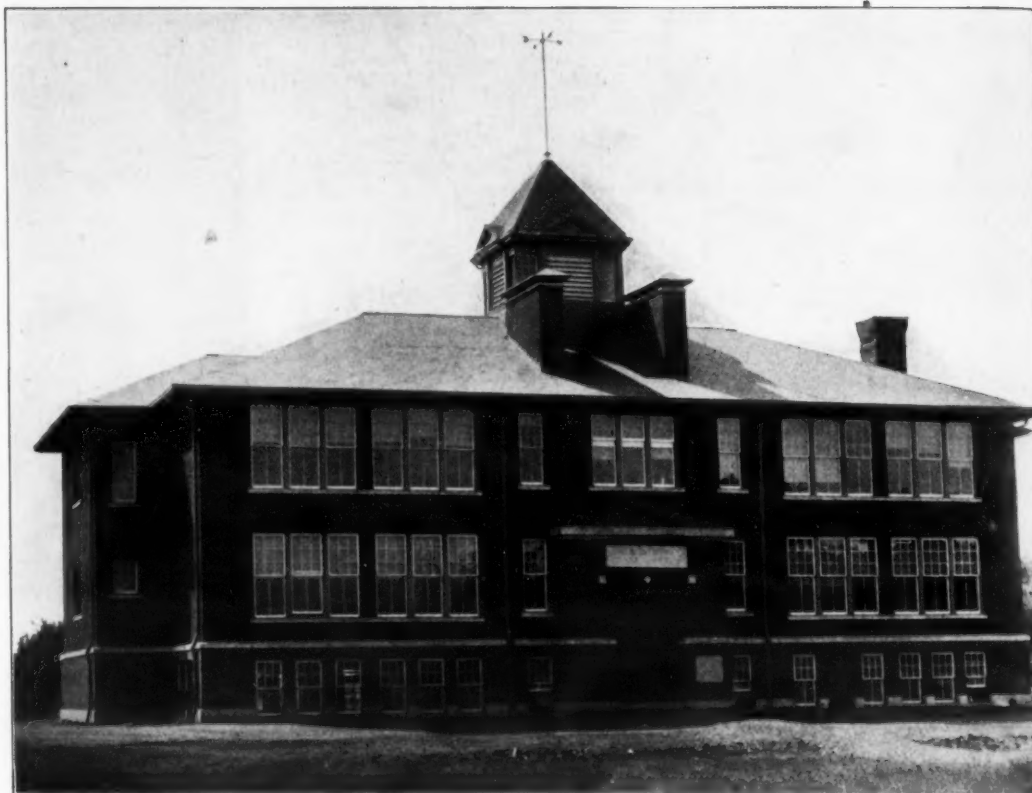
The building contains, also, an office for the principal and a chemical and physical laboratory.

The building has been constructed under the very stringent laws of the Ohio School Code and has separate fireproof exits from each classroom. The fire stairs which lead from the class-

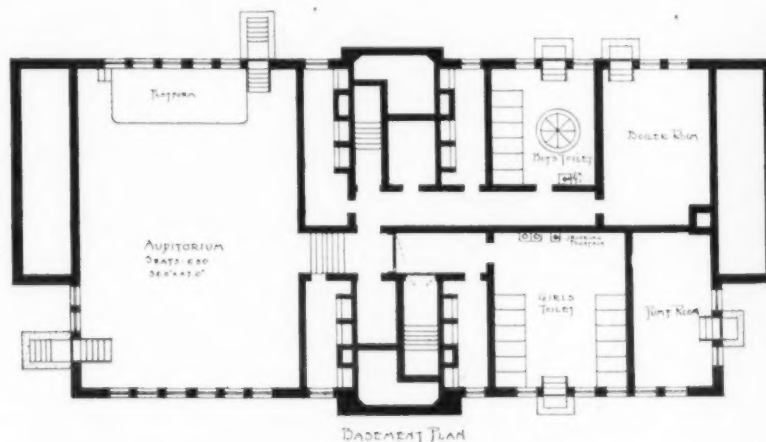
rooms are enclosed in masonry walls.

The school has at present an enrollment of 232 pupils and takes the place of eleven one-room schools which were abandoned after its completion. Nine wagons are used to haul the pupils.

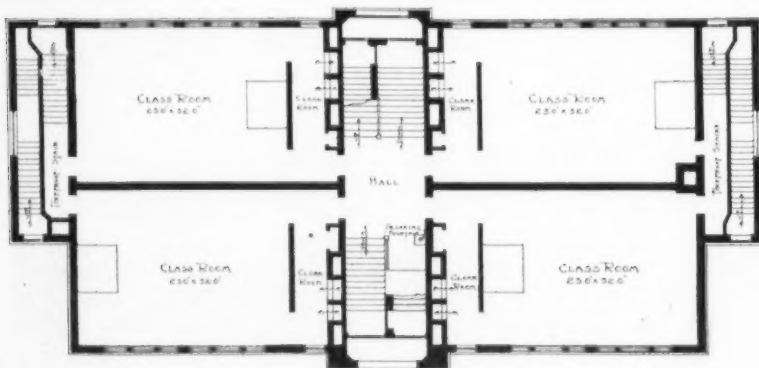
The building cost, complete, approximately \$32,000. The architects were Messrs. Dawson & Holbrook, Columbus, O.



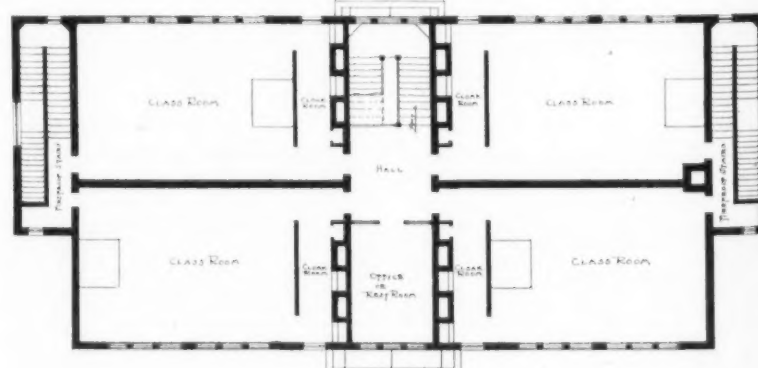
JACKSON TOWNSHIP CENTRALIZED SCHOOL, PICKAWAY COUNTY, OHIO.
Dawson & Holbrook, Architects, Columbus, O.



BASEMENT PLAN

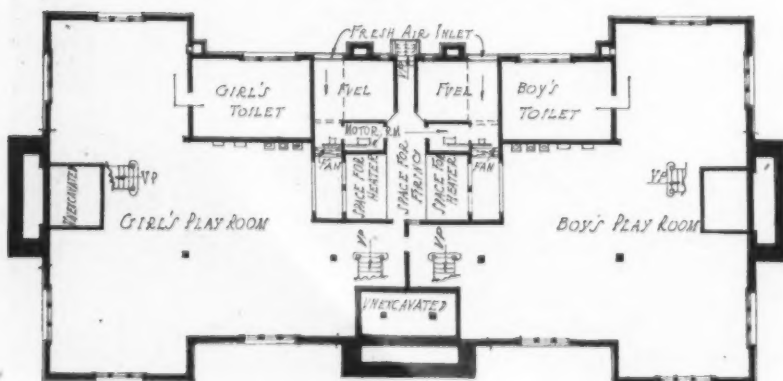


FIRST FLOOR PLAN

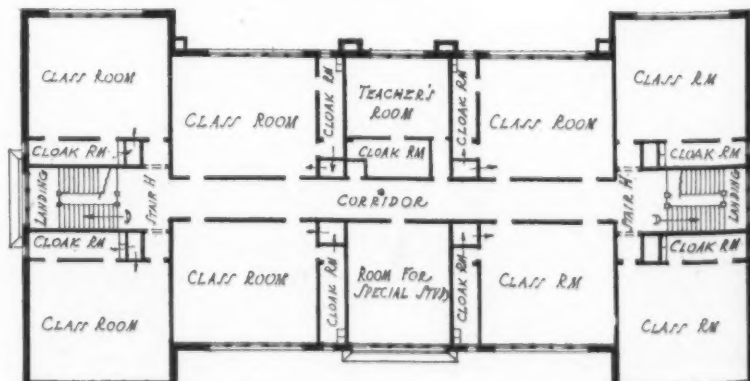


SECOND FLOOR PLAN

FLOOR PLANS, JACKSON TOWNSHIP CENTRALIZED SCHOOL, PICKAWAY COUNTY, OHIO.

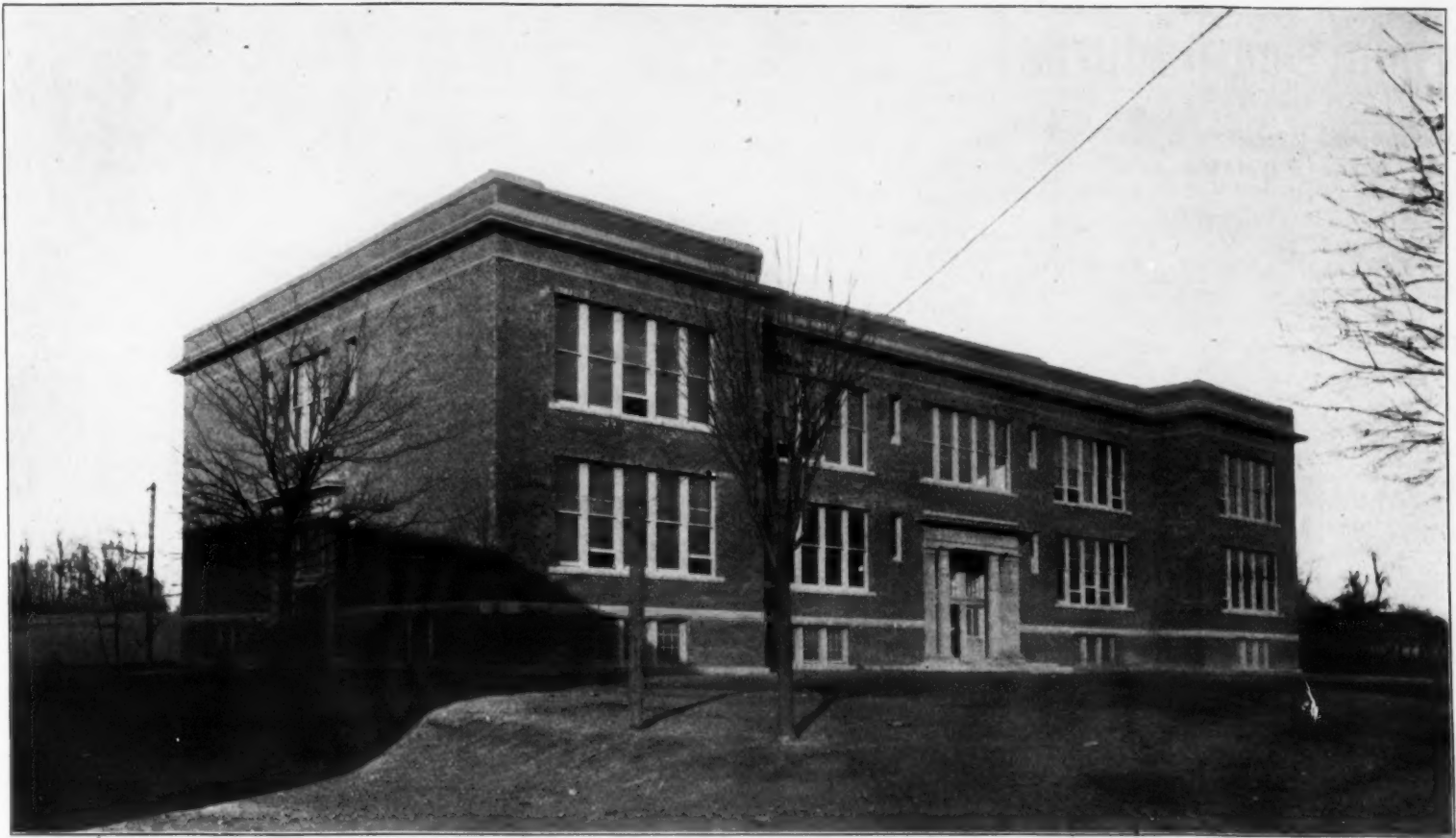


BASEMENT PLAN, GLEN COVE SCHOOL.



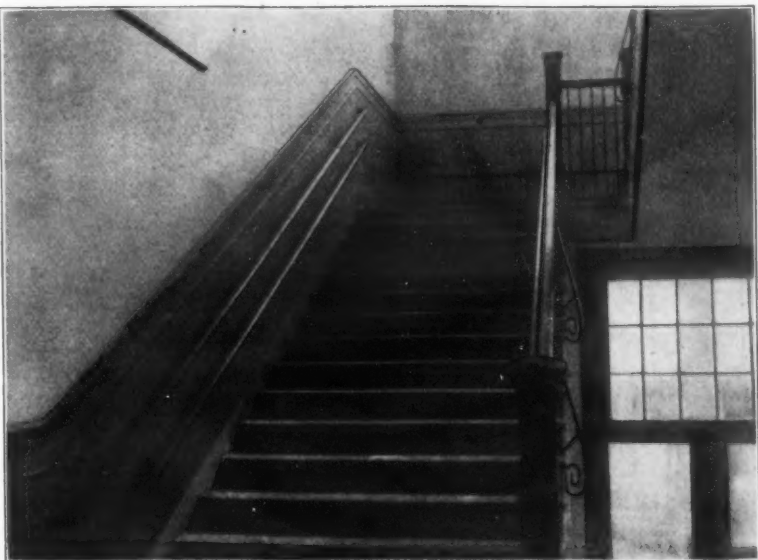
SECOND FLOOR PLAN, GLEN COVE SCHOOL.

(See page facing)

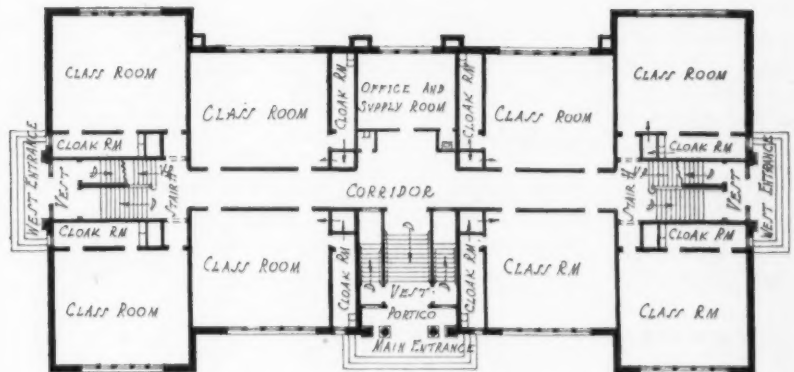


GLEN COVE INTERMEDIATE SCHOOL, GLEN COVE, L. I., N. Y.
Mason R. Strong, Architect, New York City.

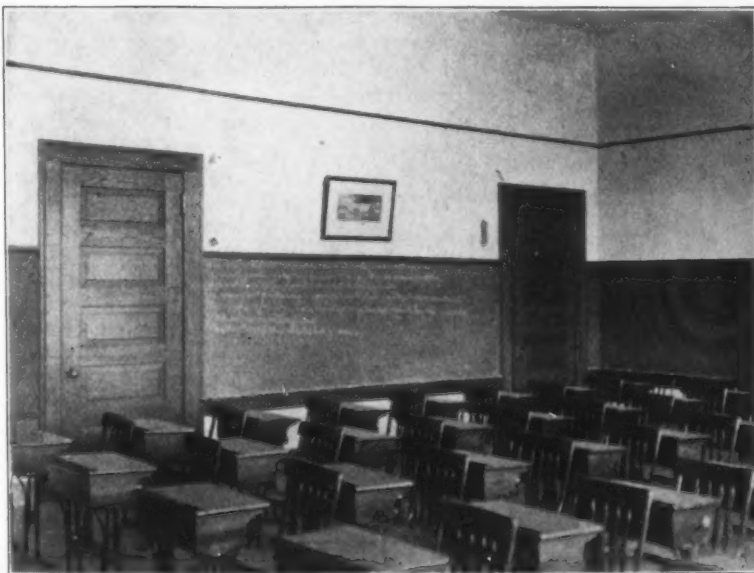
Description see page 54.



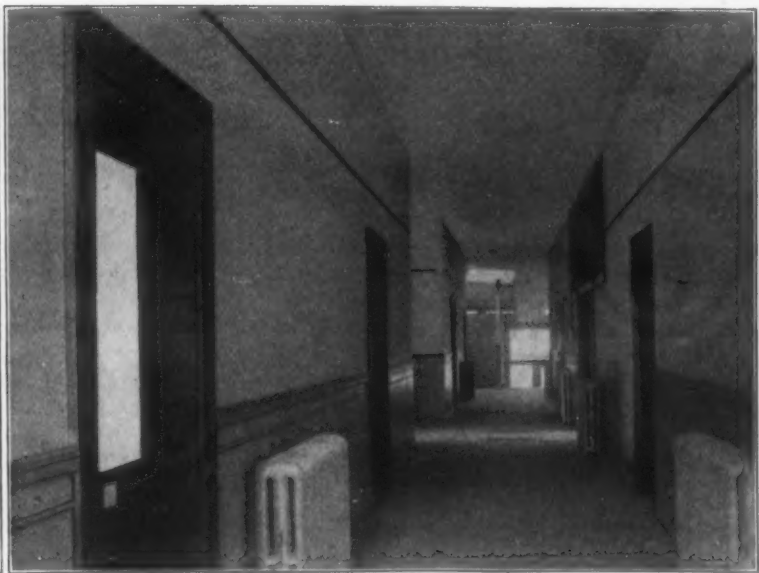
STAIRCASE, GLEN COVE SCHOOL.



FIRST FLOOR PLAN, GLEN COVE SCHOOL, GLEN COVE, N. Y.
(See page facing)



TYPICAL CLASSROOM, GLEN COVE SCHOOL.



MAIN CORRIDOR, FIRST FLOOR, GLEN COVE SCHOOL.

THE AMERICAN School Board Journal

DEVOTED TO

Legislative and Executive School Officials

WILLIAM C. BRUCE, Editor

EDITORIAL

STATE REGULATION NEEDED.

While the design and construction of American schoolhouses has progressed tremendously during the past decade, it is regrettable that it has not done so uniformly in all sections of the country, or in a great proportion of the cities and villages. As in general school matters the large cities have been leaders in evolving new types of school buildings and in bringing the standards of construction and equipment to a high level of effectiveness. Such details as safety of construction, safeguards against fire and panics, improved sanitary equipment, adequate heating and ventilation, improved furniture and equipment, have received scientific study at the hands of the best expert architects and engineers and buildings have been produced which for safety, economy, convenience and utility are unequalled by any other class of public structures whether national, state or municipal.

The cities of medium size have largely followed the lead of the great metropolitan centers and are building very creditable schools. In many, the high school has become the pride of the community and often even more than the city hall or court house has become the center of civic interest. This is, however, not true of all middle-size cities and is only rarely the case in the smaller towns and villages. In the last mentioned communities, too often the mistakes of a quarter century ago are being perpetuated in the poorly designed, ill-adapted and unsanitary buildings that are still being put up year after year. Ignorance of the true principles of school architecture, the lack of sufficient funds, a want of interest in school improvement, or even decided antagonism to the same, a spirit of thrift (as New Englanders term it) are factors which stand in the way of the planning of better schools.

There is at present a very real need of state regulation—at least so far as the minimum requirements are concerned—of all schoolhouse construction. The state is as much concerned in the proper housing of the pupils of the public schools as the local communities are. Education in the United States is a state function and school officers are agents of the state not of the local municipality or township. The laws authorizing schools are state laws and the responsibility of school boards is due to the state rather than the local government. The funds are most largely state moneys.

The state has a very real right to say how school buildings are to be erected just as well as it has a right to and does say what standard the schools are to attain. When there appears to be a lack of interest or an unwillingness to house children in sanitary, safe and suitable buildings the state has the right and the duty to say what shall be done to comply best with its policy of education. All of these administrative principles are well established in the school laws of the various states, but there is an immediate need for a definite and complete expression of the same in the legal powers and duties of state school officials.

In Pennsylvania, Utah, New York and New Jersey the school laws provide for state approval of all school house plans; in Ohio, Indiana, Massachusetts and several other states the building or health departments of the respective commonwealths exercise a similar con-

trol with splendid effect. In each of these states the laws provide a more or less efficient minimum for strength of construction, heating and ventilation, lighting, fireproofing, and safeguarding against panics, for sanitation and plumbing, standards for floor area and cubic contents of classrooms, width and construction of stairs, corridors and exits, etc. The very simple and effective device of enforcing these requirements by compelling the approval of each set of plans and providing the alternative of the withdrawal of support for such local boards as ignore the state's orders, has made the laws easy to administer.

Similar laws are needed in every state and are, so far as we can see, the only efficient means of improving present standards of school architecture and of compelling their universal acceptance.

THE ANCIENT CONFLICT.

The members of the New York board of education have caused to be introduced in the state legislature a number of measures known as the McKee bills, which have reopened the old question of professional and lay authority in educational affairs. The bills, in brief, take from the superintendent the power of initiative in such expert matters as the formulation of courses of study and the changing of grades of schools; they place in the hands of the president of the board the power to appoint members of the teaching staff to investigate educational conditions; they deprive the superintendent of the power to appoint district and associate superintendents, and place the direction of special supervisors with the board.

As the present charter of New York City has been interpreted, the city superintendent has complete control of all strictly educational matters. His word is law and even though the power of final veto still remains, legally, with the board, the members have rarely made use of it. In fact, the superintendent has been able to block practically every outside advance for changes in school conditions of which he did not approve and has, with almost no exception, carried through such ideas as he has promoted.

Certain members of the board have believed for some years that changes should be made in the school charter provisions which would enable them to do more than approve of the superintendent's work. They are seeking to make the school administration more democratic and to add power to their present responsibility.

But the bills are wrong in principle and dangerous in their possible effects. Aside from the fact that they ignore the results of the recently completed school inquiry, they fail altogether to differentiate between the executive functions of a professional superintendent and the legislative and confirmatory functions of a lay board.

It is an old principle in school administration that the professional factors shall initiate all professional and strictly educational matters. This is absolutely essential if the schools are to receive the benefits of expert judgment and experience which superintendents possess and if there is to be a continuously wise educational policy based upon tried pedagogic methods and correct principles. A continuously changing board of busy laymen should not be expected to render such service and in fact never does.

The McKee bills, as the Public Education Association points out, ignore altogether general experience and opinion and the established principles of school administration as expressed in the school laws of the various states. What is more serious, however, is that they open the way to all sorts of political influence in the schools. That Tammany has for years sought to control school affairs in New York City is not a secret. The recent clashes between the

City Board of Estimate is evidence enough of the desire of the city administration to extend its power over the schools still more. If the McKee bills are passed there will be no bar to the complete subjection of the schools to political control.

PUBLICITY IN SCHOOL ELECTIONS.

Of the factors which make for effectiveness in securing the best material for school-board memberships, publicity is too often overlooked by the best friends of education. Professional schoolmen themselves are given to "fix" lists of candidates in secret caucuses and little select conferences, instead of allowing the discussions to come out into the full light of day. The situation in many communities is correctly described by the Danville, Ill., Press. It says:

"The annual whisperings about the selection of members of the Danville board of education are now being dusted and brought out for the usual spring airing. We call them whisperings because it has been very seldom that anybody has had the courage to speak out 'in meetin,' or to express an opinion that had strength enough to stand alone. There have been complaints a plenty, and grievances without number and to be had without the asking, but every complaint and every grievance has been handled as if it might explode and tear up the town. And so it has been going on for years and years, all talk and nothing done. There has been a constant buzzing about and around the board of education and the schools, and everybody concerned expecting to get stung at any moment. Under such conditions it has been impossible for the schools to prosper or to make any sort of satisfactory progress. Teachers have been uncertain as to their tenure of employment, and pupils have become infected with a feeling of discontent and of rebellion. And all of this has come about because everybody has been sitting upon the lid, instead of opening things up and letting in the sunlight and the air. Thus has the evil day been put off for a time, but not avoided."

To "sit on the lid" may be of advantage at times, but as the Press continues: "We can see no serious objections to openly and publicly discussing questions concerning the schools, nor in discussing the merits of the men who may be candidates for membership on the board of education. There is no occasion for whispering nor of secret caucuses to select candidates for membership on the board. Everybody is interested in our schools and everybody wants our schools brought to the highest state of efficiency. There has been too much secrecy already in the matter of school elections, and it seems to us that it is high time for the patrons of the schools, the people who pay the taxes and provide the pupils, to take a hand in the selection of school officers. The success of the schools depends almost entirely upon the membership of the board of education, and it is of first importance that that membership be made up of the best material available. And in selecting members of the board there should be no thought in the mind of the voter except a desire to do that which shall be best for the schools." That is sound advice which every school-board official may well follow.

NO SUPPLEMENTARY BOOKS.

Kansas is noted for the progressiveness of its educational policy; it is notorious for its erratic treatment of the schoolbook problem. The selection of proper textbooks has for a decade been a cause for strife in the state legislature and the press, and more than once in the courts. Quite incidental to the recent outbreak, that is to have as a result the state printing of all schoolbooks, has been a suit brought in the

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Supreme court to prevent the use of all supplementary texts.

The city of Lawrence, which found it of advantage to supplement the regularly adopted readers by books affording additional material for training children in the mechanics of reading, has been reproved by the Supreme court. It must discontinue the use of all supplementary books and confine the instruction to the basic texts, insufficient as they may be.

Undoubtedly the decision of the court is based upon a careful interpretation of the law and is in every way correct. It is not the court which deserves condemnation, but the men who made the law and men who sought of the court the narrowest interpretation of the law that a few cents might be saved to the poor taxpayers.

There is no necessity of arguing the desirability of supplementary texts; educators universally demand them as a necessity to the modern school and school boards have recognized them as indispensable aids to good teaching.

The Kansas law places the Kansas schools in the situation of intellectual Oliver Twists whose request for additional intellectual food must be met with condign punishment.

THE ECONOMIC VALUE.

Has vocational education any real money value to the city which spends its taxes for making boys skilled in any branch of industry? Is there any community profit in trade instruction?

Superintendent D. O. Small of Beverly, Mass., answers these questions with an emphatic affirmative and points to the records of fourteen boys which the local trade school graduated last June.

The wage earning capacity of the boys, estimated at \$6 a week on entrance, now ranges, according to the report, from \$15 to \$18. A capitalization of each boy's economic value to the community, based on his wage earning power, shows an increase from approximately \$6,000 to a figure between \$15,000 and \$18,000, varying with the individual. The cost of producing this increase has been only \$800 per boy.

"We had left an active stock in process, fifty-six boys in various stages of preparedness for the trade," says Superintendent Small, "and the prospects of a very much larger capitalization as years go by and the graduates become more skilled.

Incidentally he concludes that during the two and one-half years' training the community profited over \$10,000 in the wages earned by members of the school.

SCHOOL SURVEYS.

School "surveys" are a characteristic evidence of the present unrest in school affairs.

The public and the press, which have assumed



As Some Educators Would Have It.

an attitude of faultfinding with the work and the products of the school, find their opinions ably seconded by the critical comments of educators as expressed in teachers' conventions and in professional literature.

Of this wave of criticism, the great proportion is inane and purposeless and tears down without building up. Many earnest school officials have recognized this and are seeking, so far as their respective communities are concerned, to establish the truth or falsity of alleged faults by means of expert examinations of the schools. They are seeking to add to criticism the very useful factor of recommendations for improvement in organization and classroom methods.

School surveys can become a powerful factor for school improvement provided they are thorough and scientific. They may be positively harmful if they are not free from all outside influence and have not for their main purpose to be helpful rather than faultfinding. A prime requisite is that the men who are entrusted with the examinations shall have sufficiently broad experience and thorough training in education to make them competent, accurate and impartial judges of conditions. Young, inexperienced men and students have no place here. School surveys must not be arranged for the benefit of anyone except the pupils of the schools.

NORTH CAROLINA ADOPTS COMPULSORY EDUCATION.

North Carolina has fallen in line for compulsory education and has just enacted a bill which not only requires school attendance, but also lengthens the minimum school term to six months.

These improvements will call for an increase of a half million dollars in the school appropriations, but were the amount ten times as great, it would be a wise investment and a vast economy beside the neglect of the State's educational interests. As a result of this forward-looking legislation every sphere of North Carolina's public life and of its people's affairs will be quickened and enriched. It will move upward more rapidly, it will develop a more contented and prosperous citizenship.

The five remaining Southern states which have no attendance laws, may well follow North Carolina's good example. They can in no better way prove their earnest desire for progress.

N. E. A. PREPARATIONS.

The officers of the National Education Association have fixed the location of the summer meeting for July 7-11 at Salt Lake City. The National Council is to meet on Saturday, July 5 and the regular program will open on Monday, July 7.

Secretary D. W. Springer has announced that the Western and Trans-Continental Passenger Associations have granted a very low rate from Chicago and St. Louis westward, and from the Pacific Coast eastward. Assurances have also been received that the Central Passenger Association will grant as low a rate as has been customary in past years. The railroads in the vicinity of Salt Lake are planning low excursion rates to nearby points of interest. By paying \$1.50 in addition to the regular rate, passage may be obtained to Yellowstone Park where special accommodations will be made. A form of ticket which will be on sale will be a through-Pacific Coast ticket with very liberal stopover privileges.

The people of Utah are making strenuous efforts to obtain a large attendance. The state has guaranteed a membership of 3,000 and the mountain and Pacific Coast states have promised to send proportionately large delegations.

The earnestness of the Utah people has been

evidenced by an appropriation of \$7,000 made by the state legislature for the entertainment of the convention. The local preparations, it is stated, have been almost completed; the general sessions will be held in the Mormon Tabernacle and the headquarters will be located in the Hotel Utah.

A series of entertainments and excursions are being planned by the local committee culminating in a general reception at the Salt Air Beach of the great Salt Lake.

WHY?

Why are you a member of the school board? Is it to gratify an ambition to hold public office, to draw public attention to yourself, to satisfy a greed for petty personal glory? Or, are you a member because you have "an ax to grind?" Are you trying to further your business interests? Or perhaps, are you trying to get even with some teacher or other school employe who may have incurred your antagonism?

If you, Mr. School-Board Member, must answer *yes* to any of the above questions, you have no moral right to continue in office.

The only sufficient reason for holding a membership on the school board is a desire to give public service, to help in making the schools efficient.

A CONSERVATIVE VIEW.

Dr. J. M. Greenwood has given some sensible and conservative advice to the Kansas City board of education on the problem of sex education. Following a visit to seven of the largest cities in the East and Middle West, he reports: "This question has been brought to the attention of your Honorable Body on various occasions, and I made it the subject of special inquiry wherever I went. The Cleveland Plan appears to me to be the safest and most sensible of any method investigated. It is simple and workable. At certain public-school buildings of evenings, a woman physician, tactful and well qualified, presents the subject to such mothers as are interested; and at the same buildings at other evenings, a male physician speaks to the fathers. These meetings had been largely attended, and no objection had been made from any source. They constitute a part of the Public Lecture system. There are physicians in this city of both sexes who are willing, no doubt, to speak to the fathers and mothers on this subject."

"The more true experts know about education, the more they appreciate what a whole lot there is yet to learn."

Patience is a slow-going virtue, but teachers who have it invariably win in the race for success.

Next to the teacher with a grievance, the greatest bore is one who won't listen to yours.



Is it Wise to Economize on Architects' Fees?

The Country School House Perfect

Photographs taken especially for this article by Wasson, Decatur

The country school is generally pointed to as the weakest part in the American school system, whether the curriculum, the teaching force, the financial support, or the physical equipment—in the form of buildings, furniture, apparatus and books—are considered. And, this is indeed regrettable because more than two-thirds of the children attending schools in the United States are enrolled in country schools. For a great portion of the farming element of the nation the country school is the only means of intellectual development—the only efficient means of education.

Architecturally the American country school is a disheartening type of building. Almost invariably it is devoid of graceful architectural ornament and even where there is some beauty of outline or proportion, the bareness of the site and the neglect of shrubbery, fences and outhouses destroys the effect of the whole.

Quite a contrast to the American rural school are the German, the Austrian, the Swiss and Scandinavian country schools in which the native building styles have been worked by paternal governments into structures of true architectural beauty and romantic interest.

But, the American country school is progressing rapidly, thanks to the interest of a number of state school departments. Highly creditable indeed are the sketches and plans for country schools which have been prepared, in Wisconsin, Minnesota, Washington, Missouri, Illinois, Tennessee, Georgia and a number of other states, for the use of school boards whose funds do not permit the employment of architects. If these plans were generally followed it would take but a few years to make the country schools of the United States the best in the world.

From the strictly school-point of view a sanitary, convenient schoolhouse is indeed a good investment. It is a fact that an improperly planned, poorly lighted and ill-ventilated schoolroom interferes with school progress. Any condition that interferes with physical comfort and well-being also detracts from educational progress. No teacher can do her best work and no

child will study to good effect if it is not housed in a school that is cheerful, clean and well built, with lighting that aids rather than injures eye-sight, heating and ventilation that assures an abundance of fresh warm air and furniture that is comfortable rather than back-breaking.

A schoolhouse which conforms to the highest ideals of the enthusiast for good country schools, and which sets new standards for design and construction in one-room buildings, has been offered by the Illinois school department. The plans were drawn by Mr. A. Carlys Zimmerman, state architect, through the efforts of Mr. U. J. Hoffman, of the state department of education, and have been used in a number of districts. On these pages we present views of the Cross Roads School, near Decatur in Macon County, which has been built from Mr. Zimmerman's plans.

The building has been planned to meet all the requirements of a comfortable, sanitary and convenient school home for the children. The architect has succeeded in devising an exterior which is homelike and inviting and which at the same time has lost none of its school character.

While the plan is calculated to work up equally well in brick, concrete blocks or wood,

the last mentioned material has been employed in the Cross Roads School. The outside dimensions are 32 by 33½ feet. The classroom is 23 by 31 feet and has a clear height of 13 feet. The library room is 8 by 9 feet; one cloakroom is 4½ by 9 feet and one 6 by 9 feet and the vestibule is 6 by 9 feet.

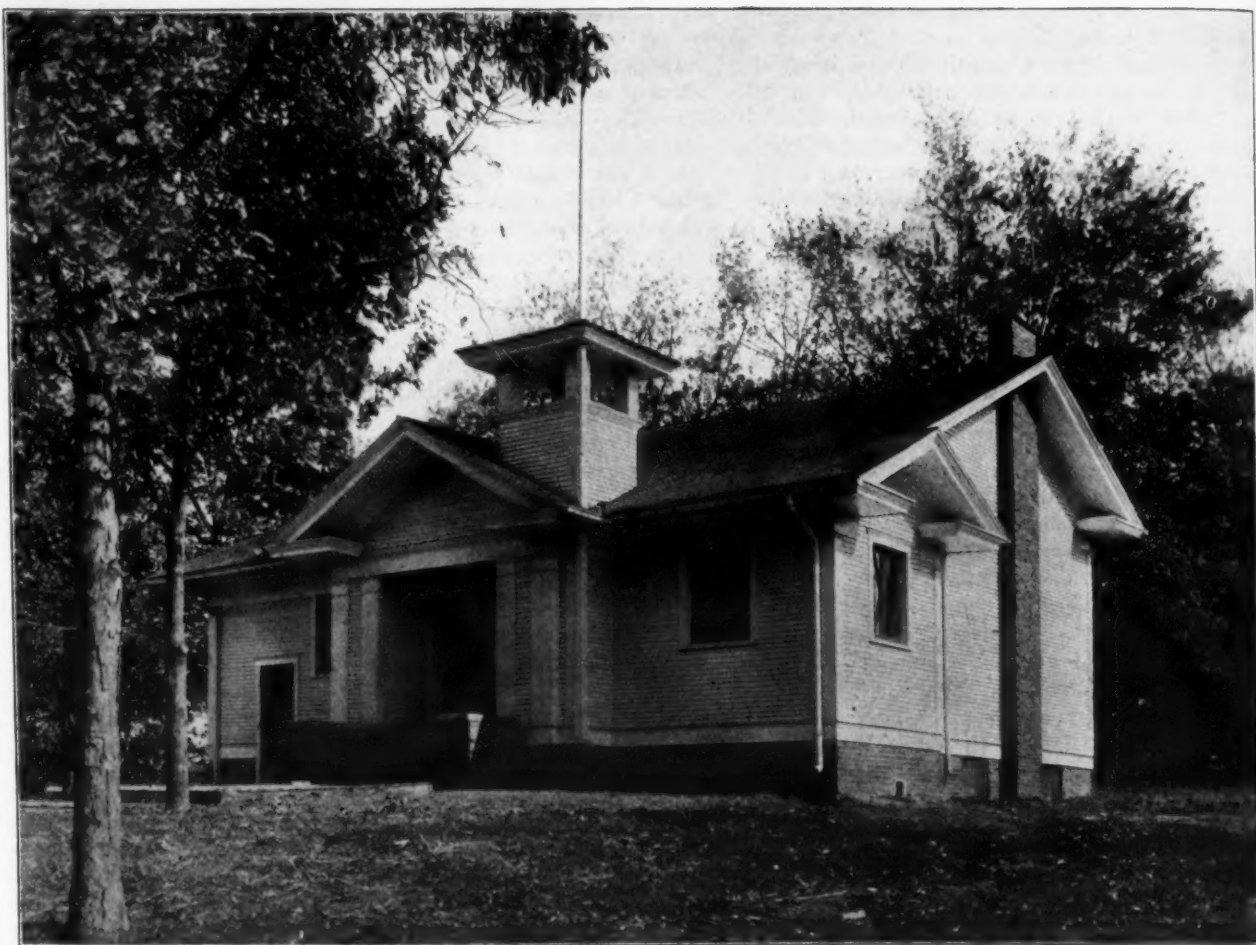
The vestibule is intended for an entrance only. It has glass panelled doors both inside and outside so that the teacher may see what is going on at all times.

The classroom is planned to seat comfortably forty-five pupils and has in addition to the single seats two recitation benches. The arrangement is such that the teacher standing at her desk may have every pupil within plain view and may at the same time have a view of the library, of both cloakrooms and of the vestibule. She may, also, have a view of the playground at the rear of the building.

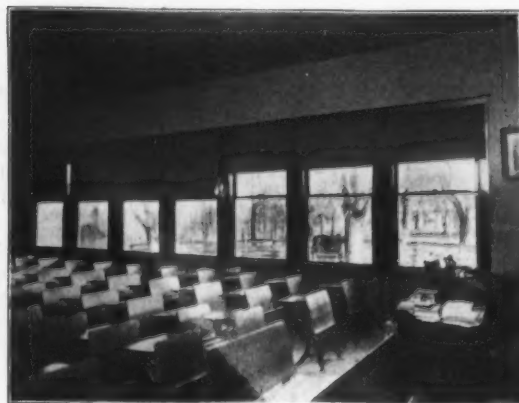
The building is placed so that the light of the classroom comes from the north and the children are seated so that their work is illuminated from the left. The windows which are in a solid block are provided with heavy green shades. Two windows are provided in the rear so that some sunlight enters the room during the afternoon.

The building has been planned to be heated

(Continued on Page 28)



CROSS ROADS SCHOOL, MACON COUNTY, ILLINOIS.



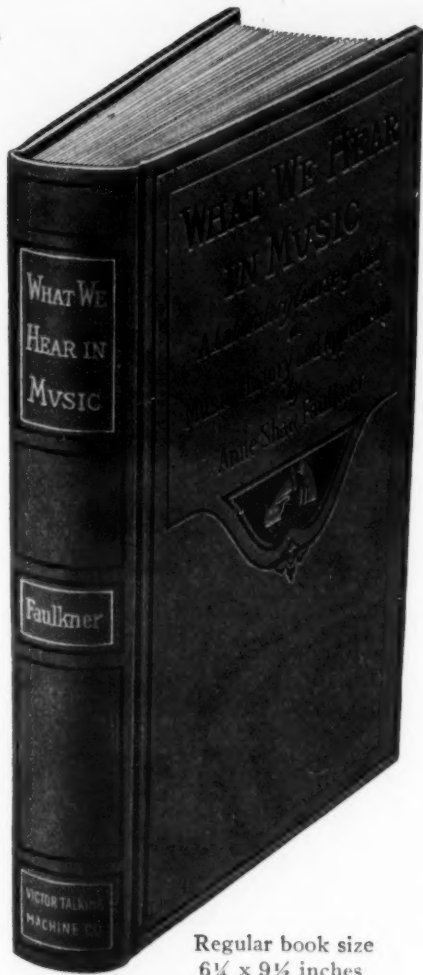
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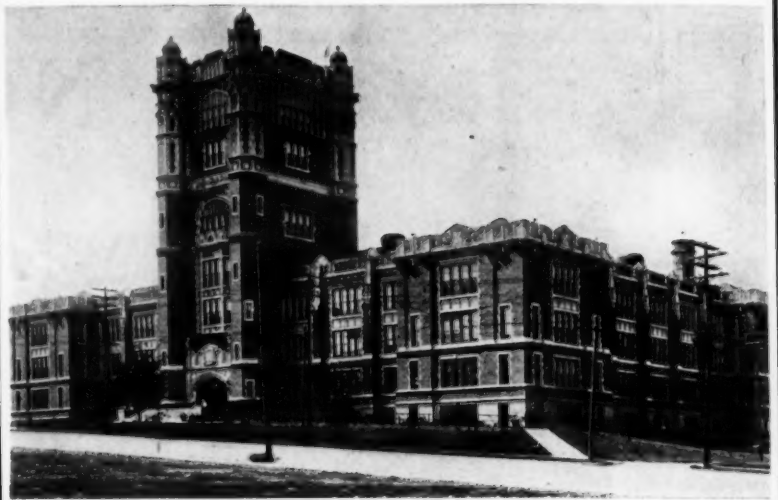
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Dallas, Texas.....3105 McKinney Ave.
Omaha, Neb.....318 Flatiron Bldg.
Toronto, Ont.....118 Adelaide St. W.
Winnipeg, Man.....259 Stanley St.
Vancouver, B. C.
Montreal, Que.

by a jacketed stove, but in the Cross Roads school, a furnace has been installed supplying fresh warm air by means of two floor registers, one near the windows and another near the entrance to the basement. The foul air is exhausted from the room by means of a flue which has its opening at the floor line and which is heated by means of the smoke flue. The foul-air duct is 8 by 20 inches in size and the smoke flue is 8 by 12 inches. The arrangement is such that the latter warms the former and creates a natural suction.

The building is most substantially constructed in all parts. The basement is made of brick and the exposed parts of the same, as also the chimney, are faced with a red pressed brick. The carpenter work is of the most substantial

character. The basement floor is concrete and the classroom floor of rift-sawn pine. The wood-trim is white pine, with natural finish. The building cost, complete, approximately \$2,000.

The library room is fitted with a bookcase built against the wall and has been furnished with a table and a few chairs.

An outline of the bill of materials for the building is as follows:

Excavation (for building without basement).

Trench, 142'x2'x4'.
4 piers, 2'x2'x4'.
Chimney pier, 1'x4'x6'.
32'x35'x1'.

Brickwork (for building without basement).

141 5' 9" wall, 5' deep.
1 flue, 1.5'x4'x26' high.
4 piers, 13'x13'x5'.
6 yds. sand.
5.5 bbl. lime.
5.5 bbl. cement.

Flag Pole Base—

Concrete, 2'x2'x1'.

Chimney Cap—

Stone, 4'x1.5'x4'.

Ventilating Grates in Foundation—

5 vents, 6'x9", cast iron.

Flue Lining—

8'x12'x20' high.
8'x20'x20' high.

Woodwork—

Girders, 6 pcs., 6"x10"x12'.
Sills, 6 pcs., 2"x8"x20'.
Sills, 8 pcs., 2"x8"x18'.
Floor joists, 59 pcs., 2"x8"x12'.
Floor joists, 13 pcs., 2"x8"x10'.
Studs, 108 pcs., 2"x4"x14'.
Wall plates, 8 pcs., 2"x4"x16'.
Wall plates, 4 pcs., 2"x4"x18'.
Wall plates, 4 pcs., 2"x4"x12'.
Ceiling joists, 25 pcs., 2"x6"x24'.
Ceiling joists, 34 pcs., 2"x4"x10'.
Rafters, 52 pcs., 2"x8"x16'.
Rafters, 26 pcs., 2"x4"x14'.

Rafters, 5 pcs., 2"x4"x16'.

For cripples, 40 studs, 2"x4"x12'.

Roof sheathing, 1,100 sq. ft., 1"x4".

Roof braces, 26 boards, 1"x4"x16'.

Roof shingles, 13,000.

Boxing, 2,040'x1'.

Siding, 2,500'x4".

Flooring, 1,450 sq. ft., 1"x4".

Cornice plancier, 225 sq. ft., 1"x4" wainscoting.

Wainscoting, 860 sq. ft.

Lining for fuel room, 250 sq. ft. of flooring.

Cornice crown mould, 234 ft., 4" wd.

Finish lumber, base, corner-boards, frieze, ridge-boards and steps, 655 ft.

Doors in Frames—

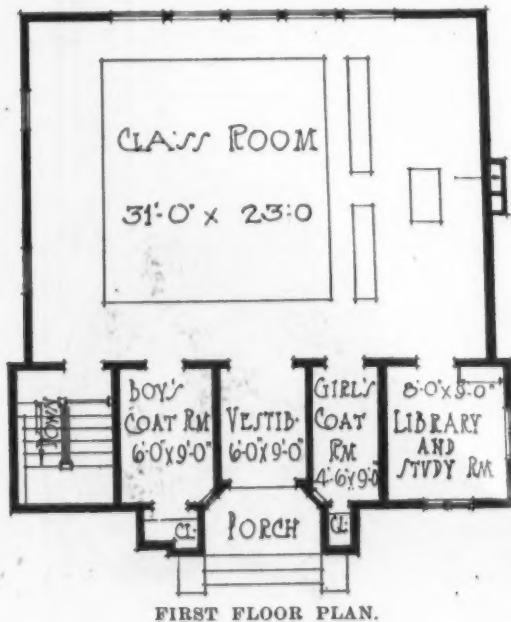
Outside double doors, 4' 8"x7'x1 1/4" G. P. Tr. 16".
5 lights.

Inside double doors, 4' 8"x7'x1 1/4" G. P. Tr. 16".
5 lights.

4 doors, 2' 8"x7'x1 1/4".

1 door, 2' 6"x7'x1 1/4".

1 door, 1' 6"x7'x1 1/4".



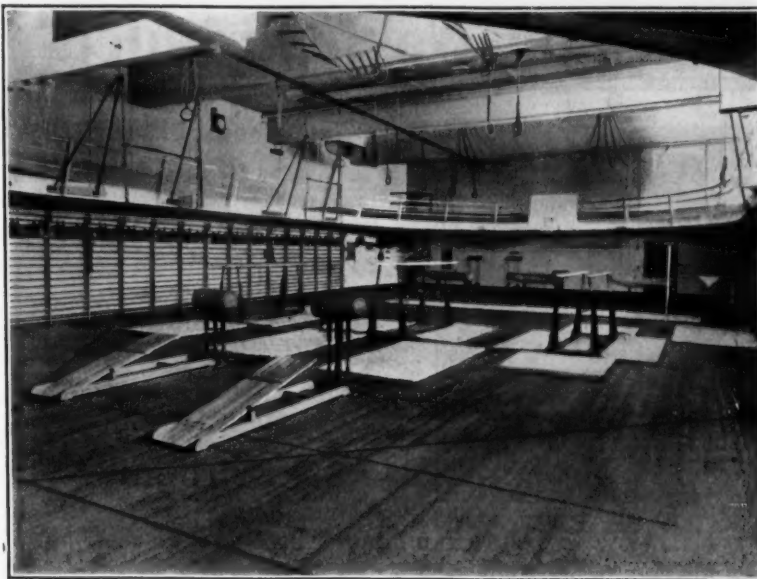
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- 2 windows, plain frames, 1 L. 32"x36".
- 2 windows, plain frames, double folding sash, 1 L. 16"x44" hinged outside.
- 2 windows, plain frames, single sash, hinged outside, 1 L. 10"x44".
- 1 flag pole, 30' long, 5"x5" and 3"x3", W. I. holder.
- Lath, 5,100.

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- 9 bbls. lime.
- 6 yds. sand.
- 15 bu. hair.

Sheet metal, hardware, painting, desks, paper hanging, decorating walls and ceiling, heater, ventilating register, fresh air duct, blackboards, walks.

BUILDING AND FINANCE.

The school board of Omaha, Neb., has purchased anti-panic bolts for all the school buildings. The device is fastened to the entrance

doors and prevents the locking of pupils within the building.

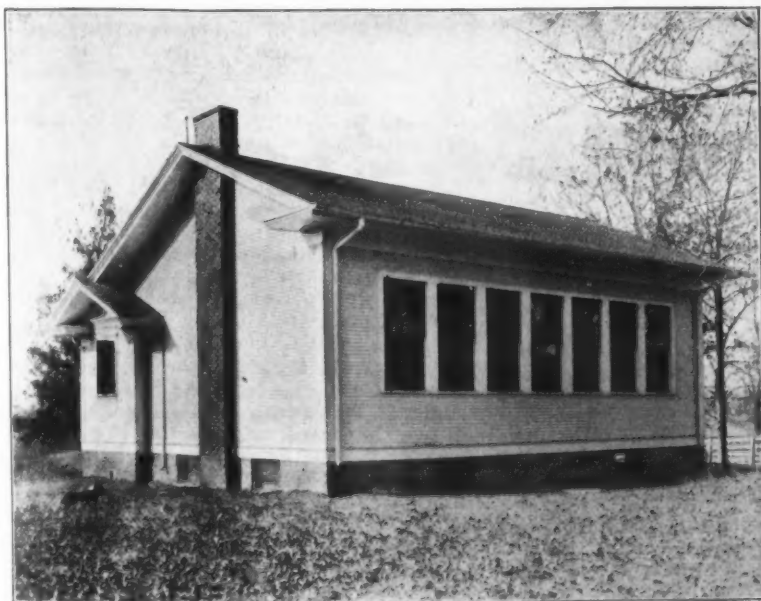
To relieve itself from temporary financial embarrassment on account of not having obtained a fiscal agent the School Board of New Orleans negotiated a loan through a local bank by which \$500,000 was borrowed from the London banking firm of Kleinwert Sons & Company. The money will be obtained on bills of exchange in installments each month beginning with March and including June and will be returned October and November 1. The rate of interest is not to exceed 6 per cent. depending upon the prevailing rate of exchange at the maturity of the bills. The money was loaned upon the personal representations of Sol Wexler, president of the School Board and also president of the Whitney Central Bank and Trust Company. Had it not been for the successful negotiations of the president of the school board the board would have been in

an embarrassing financial condition until its state and city appropriations could be obtained which will not be until the Fall of the year.

Brooklyn, N. Y. A mechanical engineer has been appointed to supervise the use of fuel in the schools. The salary was fixed at \$1,600.

Alton, Ill. The school board has begun systematizing its building department. Hereafter all repair work needed on buildings must be reported to the respective principals who will prepare three copies of a statement of the work to be done. One of these copies will be forwarded to the superintendent of schools, one to the superintendent of buildings and another to the chairman of the building committee. The orders will be filed and used instead of a monthly report by the building superintendent.

Chicago, Ill. The expenditures of the board of education during the past year were \$12,099,770 for building and \$15,299,505 for education.

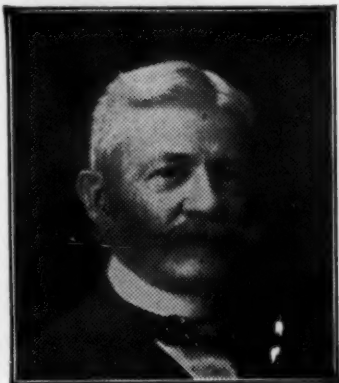


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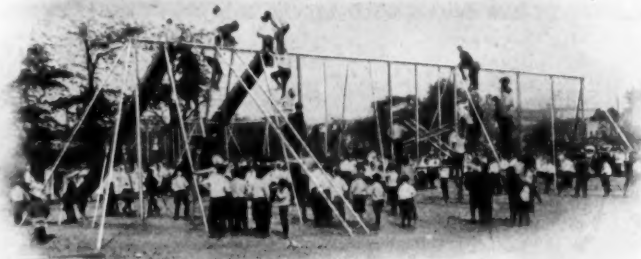
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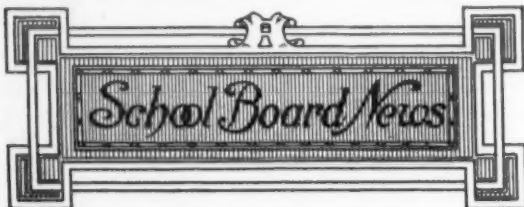
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Cleveland, O. The school board has, within the past few months, created a number of new supervisory and executive positions and increased the salaries of others involving a total expenditure of \$19,096 per year.

Two new assistant superintendents, \$7,500; three supervisors, \$4,450; additional clerk, \$600; additional stenographer, \$605.

Increases were given to five supervisors amounting to \$1,925 and to four secretaries and stenographers amounting to \$990. The increases do not take into account the addition of the West Technical High School, or of the automatic increases which go yearly to teachers and supervisors.

The New York City board of education has changed its bylaws so as to provide three assistants to principals in schools having eighty-eight or more classes and in schools having sixty-eight or more classes composed exclusively of pupils of the last two years' grades.

The school board of Des Moines, Ia., has adopted a policy, which prevents the awarding of general or subcontracts for new school buildings and additions which have been authorized at an election, until all the competitive bids have been entered. This will avoid any contract awards above the amount provided in the bond issue and the necessity of submitting additional bonds as has been the case at other times.

The school committee of Boston, Mass., has rescinded its rule which lengthened the school year two weeks. The superintendent has been instructed to devise a plan for efficient work in a shorter length of time, without extending the school year.

The school board of Baltimore, Md., has discontinued the numbering of school buildings and will hereafter designate them by name. It was

provided that the names shall be those of prominent figures in Baltimore and Maryland history.

The school board of Denver, Colo., has granted the use of school buildings for the discussion of public questions. The board's ruling was followed by the presentation of a list of schools where the commission discussion amendment will be discussed by speakers in the city. The Non-Partisan Commission Government League is in charge of the meetings.

The school board of Washington, D. C., in accordance with its policy of economy and the standardization of the teaching corps, has found it advisable to grant enforced leaves of absence to several teachers who have little work to do.

Numerous classes have been opened and others have been closed in an effort to put the schools in such shape that all classes will be filled and the teachers able to do their full amount of work. The subjects in which there are too many teachers are those of an industrial nature and these will be used in the vocational school if they are capable. If they cannot be used, they will be granted leaves of absence.

Asheville, N. C. The school board has authorized the purchase of talking machines to be used in the schools. All records will be purchased by the faculties of the schools. It is the intention of the school board to use the phonographs in the music department, special records to be provided for showing the difference in tones of musical instruments. In the high school, grand opera will be provided for the students and an effort made to encourage them in the playing of the very best selections.

The school board of Mankato, Minn., has changed its method of ordering supplies. Hereafter all supplies must be purchased through a written order or a verbal consent of some member of the property and expense committee. The superintendent is given authority to order small necessities but large bills will be in the hands of the committee.

North Braddock, Pa. The school authorities have notified cigar dealers that the law prohibiting the sale of cigarettes to minors will be rigorously enforced. It has recently been found that children as young as six years have been victims

of the habit and as a result are behind in their classes.

The school board of St. Paul, Minn., recently refused the use of the Central high school library for dancing. The request was accompanied by the statements of 250 parents of students, ninety-seven of whom favored the idea and twenty opposed it.

The school board of Cleveland, O., has forbid the collection of coupons by pupils in a contest to secure pianos for their buildings. The objection to the plan was based on the ground that the idea was in violation of a rule of the board preventing advertising in the schools. Pupils who have already collected stamps are now obliged to redeem them for cash.

San Francisco, Cal. Since the inauguration of the savings system by the board of education a year ago the total amount secured by the school children has reached \$92,000. The total number of children with deposits is \$9,000 ranging in age from six to fourteen years.

The money secured consisted of pennies, nickels and occasional dimes which were entrusted to the teachers. Deposits are made up and exchanged at the bank for credit stamps which the teller credits to each holder of a passbook. Four per cent interest is paid.

Kansas City, Mo. Two schools in the city have recently adopted a unique method of school banking in connection with the stamp savings system. A teller's cage is placed at each end of the main hallway and a cashier and bookkeeper selected from the students' ranks handle the accounts.

Seattle, Wash. The school board has reasserted its position in regard to the eradication of secret societies from the high schools. Eight students who were recently suspended appeared before the board to plead that their suspension be not extended over the rest of the term. The board deferred action, the president stating that while the members did not like to appear "foggy", still they desired to have the rule of the board observed.

Port Huron, Mich. Greek-letter societies are to be banished from the high school. The school board has announced that all students who are

KEEPING TIME WITH AIR AND GRAVITY

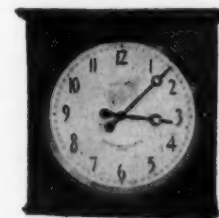


Correct time ought to be considered as indispensable in a school where from four to forty teachers are endeavoring to carry on their work and make it fit into a program that has no standard of time except disagreeing clocks with erratic program signals. The result is loss of time in beginning and ending of class periods, with attendant confusion, friction, disorder, interruptions and decreased efficiency in the teaching due therefrom. A first-class time system with automatic program attachment, that will give the signals on the moment will pay for itself every year in any large school and greatly improve the educational facilities.

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discovered violating the state law will be expelled from school.

Philadelphia. Supt. M. G. Brumbaugh has recommended the opening of special classes for crippled children. Furniture of special construction will be provided and a coach for the transportation of the children from their homes to the schools.

The past year has witnessed the planting of shrubs and hedges in seventy-one school grounds in Cleveland, O. The evident contrast between those which have been beautified in this manner and those which have been neglected must be very striking to the onlooker and especially to the children.

Minneapolis, Minn. Last year a total of 1,800 vacant lots were either cultivated or beautified and the general appearance of the same improved.

The state of Maryland has recently raised the age limit for child workers from twelve to fourteen years. This means that more than 2,000 new pupils are to be enrolled in the schools of Baltimore, more than half of whom are boys and girls who will attend day schools. The remainder who comprise those between thirteen and fourteen years, may continue at work provided they attend night school.

Everett, Wash. Since September, 1912, the high-school authorities have begun an experiment in partially segregating the boys and girls and since February, 1913, a similar experiment has been undertaken in the eighth grade classes of the Central school.

This step, both with reference to the high school and the eighth grade, has been taken in the belief that there is enough difference in the way the minds of boys and girls attack a subject to classify them separately. Teachers find themselves presenting subject matter in a different way to a class of boys than to a class of girls. So far the testimony of the teachers has been favorable to the segregation in this respect. It is thought to be much better to have the boys and girls separated in the grammar and high-school grades for the reason that this is just the stage when boys and girls are apt to become too conscious of the attractions of the opposite sex. This plan also facilitates the classification of pupils for their industrial work.

Prof. G. M. Wilson, assistant in the Department of Administration of Teachers' College, Columbia University, has resigned to become head of the Department of Agricultural Education at the Iowa State College.

Springfield, Ill. The board of education has devised a plan for a savings system in the schools. The aim is to encourage the children to save pennies until they have secured 100. These are then deposited in a bank for the purpose after which the children begin again to collect a similar number.

Albany, N. Y. The school board has adopted a rule to expel any student in the high school who is a member of any inter-scholastic secret society or of any exclusive society of a secret nature within the school. The board believes the societies are detrimental to the welfare of the schools.

Eli W. Weaver, for some time principal of the Boys' High School of Brooklyn, has been engaged by the Chamber of Commerce at Buffalo, N. Y., to establish a bureau which will bring employers into closer relationship with the schools. The bureau aims to accomplish three things. It will find out why the child wants to leave school and will endeavor to persuade him to stay in school as long as possible. If the child must leave, the bureau will try to find employment for which he is best adapted. When employment is found he will be given an opportunity to attend the extension schools, where he is trained along the technical lines of his work. Mr. Weaver will be retained for at least six months at a salary of \$300 a month.

St. Joseph, Mo. The school board has given the school physicians authority to report to the health department all cases of contagious diseases found among pupils. A certificate from the city physicians must be obtained before such pupils can be re-admitted.

The Boston school committee has recently had 12,000 copies of a special annual report printed for distribution among the graduates of the elementary schools. The pamphlets are issued in an effort to keep the children in school as long as possible after they have reached the age of fourteen.

The present plan is the first of its kind attempted by the committee and it is expected will result in a large percentage of pupils remaining in school especially those whose labor is not required to assist the family.

Mention is made of the German educational system by which the pupil is kept in schools so linked with industry that when he gets through he is a skilled workman in whatever line he has been educated.

The document contains graphic charts which show the school roads a boy or girl may travel, the simple working of the continuation schools, the high schools, evening elementary schools and evening high schools.

It is estimated that about 40,000 boys and girls in the city are between fourteen and eighteen years of age. Of this number, about 20,000 are engaged in some trade or occupation. School has been left behind by these usually from necessity, and in some cases, from choice. Emphasis is placed on the fact that thousands of boys and girls leave the monotony of school to enter the drudgery of business thereby binding themselves to low wages and unattractive work. By remaining in school they could obtain higher pay, endure less hard work and have more prospects for advancement.

Industrial Schools in Detroit.

Detroit, Mich. Fifteen large industrial concerns are now sending employees to the continuation school at the Cass Technical High School. There are at present 110 continuation students in attendance, each of whom spends four hours per week at the school. The subjects include mechanical drawing, shop mathematics, pattern-making, machinshop practice, building and electrical work, general mathematics and English.

In the contract entered into by the parties concerned, a unique and interesting plan has been worked out. The plan protects alike the interests of employers and students of the school. Each makes a contract with the other which provides that the employees shall attend the continuation classes for two years and at the expiration of the term the company shall reward successful work by paying double wages with interest for the four hours per week put in at the school.

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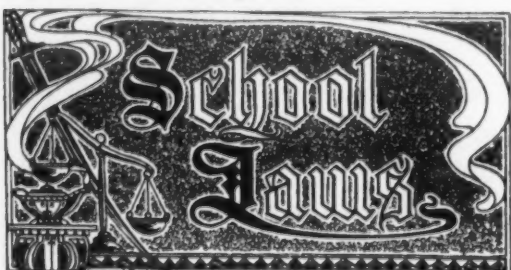
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School Districts.

Under the Wisconsin Statutes of 1898, (§ 422), as amended by the laws of 1901, (c. 304), *Held*, that annexation by city of part of the territory of a school district of a town created no joint district, but left the part of the district remaining in the town a separate district, and the part annexed an integral part of the city's school district.—State v. Schriner, Wis.

It is within the power of the Legislature to provide for a fair and equitable disposition or division of public property in the case of the division or annexation of territory.—State v. Schriner, Wis.

School District Government.

Under the Iowa Code of 1897, (§ 2757), personal notice is required on each member, and notice by mail to a director of a school corporation is not sufficient where it does not reach the member to be notified, even if the member entitled is temporarily out of the state, so that a meeting of the board without such actual notice to every member thereof was invalid, and any action nugatory.—Barclay v. School Tp. of Wapsinonoc, Ia.

Under the New York Education Law, (§ 880), the commissioner of education *Held* to have jurisdiction of an appeal by the superintendent of schools of a city from an order of the board of education fixing the lists of teachers eligible to the graduating class.—People ex rel. Board of Education of City of New York v. Draper, N. Y. Sup.

A certificate of appointment to the office of clerk of a school district to fill a vacancy caused by resignation, to continue until a successor is

elected, signed by the county superintendent, entitles the appointee to mandamus against one claiming under an unauthorized election, and a certificate issued pursuant thereto to recover the paraphernalia of the office.—Jewitt v. West, Okla.

Records.

An amendment of an application for registration of title to land *Held* harmless, though no new publication was made.—Tower v. Glos, Ill.

Under the California Code of Civic Proceedings, (§§ 1892, 1894), permitting copying of public writings and records a citizen can compel a board of education to permit him to inspect and copy its census reports, though his object is to aid his own business.—Harrison v. Powers, Cal. App.

School District Property.

A board of education in a city of the second class is vested with the power to select sites on which schoolhouses shall be erected.—State v. Board of Education of City of Great Bend, Kans.

That a board of education of a city of the second class submitted to an election the question of issuing bonds to purchase a school site and erect a building, and that both propositions were carried, did not effect the power in the board to decide where the schoolhouse should be erected.—State v. Board of Education of City of Great Bend, Kans.

A school board may erect a school on a site held under a deed providing that, on the abandonment of such site for common school purposes, the site should revert to the grantor. The Kentucky Statutes, (§ 4426a, Section 4437), requiring fee title, being an earlier statute, and in conflict, does not apply.—Ritter v. Board of Education of Edmonson County, Ky.

The intention of a school board to change the site of a school and the letting of a contract to build on the new site on which work was begun, but discontinued by order of the board, who decided to build on the old site, was not an abandonment of the old site; school at the time being taught in it.—Ritter v. Board of Education of Edmonson County, Ky.

Under the Annotated Statutes of Indiana for 1908, (§ 9598, and Acts of 1911, c. 72), school authorities *Held* to have an implied power to

provide plans and specifications for repairs on school buildings, as well as for construction, when necessary to produce the required results.—State v. Parish, Ind.

A bond given by a contractor to erect a school building *Held* neither literally nor in substance in accord with the Georgia Laws (Acts of 1910, p. 86); and hence a suit could not be maintained thereon for the use of a materialman, who had furnished material to the contractor, but had not been paid.—Town of Grantville vs. Fidelity & Deposit Co. of Maryland, Georgia.

A town which had contracted for the construction of a school building, could not recover on the bond of the contractor, which was not in statutory form, simply because of failure of the contractor to pay a materialman, in the absence of provision therefor in the bond.—Town of Grantville vs. Fidelity & Deposit Co. of Maryland, Georgia.

A school district is not authorized to withhold payment of a balance due a contractor for the erection of a school building because of a notice of lien by a subcontractor under the Pennsylvania laws, Act of May 6, 1909 (P. L. 441).—Sax & Abbott Const. Co. v. School Dist. of City of Wilkes-Barre, Pa.

Taxation.

A taxpayer cannot enjoin the sale of a schoolhouse ordered by a vote of the electors at a meeting where the proposition is rightly before them, on the ground that, having been built from taxes, he can insist that it be devoted to school purposes.—Barclay v. School Tp. of Wapsinonoc, Iowa.

Teachers.

Under the Kentucky Acts of 1912 (c. 25, § 5), where a subdistrict trustee nominates a teacher for a school in his district who is duly qualified, and no reasonable objection is offered against the nominee, the board has no discretion to refuse to elect him.—Campbell v. Owens, Ky.

Discretion of the educational division board in the selection of school teachers under the Kentucky Acts of 1912 (c. 25, § 5), *Held* limited to cases where the teacher nominated by the subdistrict trustee was disqualified or some reasonable objection was presented to his election.—Campbell v. Owens, Ky.

NEW YORK HIGH SCHOOLS CRITICIZED.

Report of Expert Finds Many Faults.

The report of Dr. Calvin O. Davis, assistant professor of education in the University of Michigan, which was issued March 15 by the New York committee on school inquiry, severely condemns the present course of study in the high schools of New York City. "It is undemocratic, unsocial and unpedagogical," says the high school expert. He declares the single uniform course now offered in the city high schools old-fashioned, decidedly narrow, too rigidly prescribed and utterly neglectful of the needs of the individual pupils.

When compared with the best practice, as illustrated in the courses of study offered in ten large cities in the United States, Dr. Davis finds that the New York city high-school course is unwisely and unjustly inflexible. His report shows that: "Virtually four-fifths of the entire four years' course offered in the New York high schools is identically the same for all students, whether they are boys or girls; children of cultured homes and surrounded by helpful influences, or children of ignorant, impoverished parents and deprived of nearly all wholesome, indirect, educative agencies."

This uniformity in prescription is condemned by Dr. Davis "as vicious in principle and injurious in practice. * * * In making the work of each year flexible, and hence more adaptable to the regular needs of individual pupils, New York City ranks below nine-tenths of the other ten cities. In the first year New York City stands at the bottom of the list; in the second year, next to the bottom; in the third year, third from the bottom, and in the fourth, second from the bottom."

Prescription in First Year of High School in Eleven Cities.

Cities.	Amount prescribed. Per cent.
New York	100.00
St. Louis	75.00
Cleveland	75.00
Cincinnati	72.22
Detroit	55.55
Indianapolis	50.00
Newark	47.37
Boston	25.00
Los Angeles	25.00
Chicago	10.00
Milwaukee	10.00

From the above table it is seen that New York City allows individuals no choice whatever in selecting their courses in the first year. Every offering is prescribed for all. In this respect New York City stands alone, no other city prescribing work in excess of 75 per cent of the amount assigned for this year, and five cities prescribing less than 50 per cent.

Interpreting these comparative statistics, the expert says: "We find in summarizing that, in respect to the scope of the work offered in the general course, the intensiveness with which many studies are pursued, and the flexibility with which the work is administered, New York City ranks markedly below the majority of other cities with which it has been compared."

City Not Abreast of Times.

Discussing the special courses, such as mechanic arts, domestic science and applied art, which are provided in the general high schools of the ten cities considered in the Davis report, the investigator states:

"In comparison with the provisions for special or technical courses elsewhere, New York City is far from abreast of the times. In the scope and intensiveness of industrial work for boys, industrial work for girls, and commercial work for both boys and girls, it suffers by comparison with several of the other cities. This is strikingly true in respect to the offering in these subjects in the general or 'regional' high schools. * * * The most striking difference discovered in comparing New York City with ten other cities under consideration is the paucity with which special courses are organized and the rigidity with which they are administered. That is to say, work in the semi-academic, technical or semi-vocational subjects is made difficult of attainment. This is peculiarly true of offerings in manual arts and in domestic arts. Though the former subjects are offered in four high schools, naturally fewer boys will secure the training in them than would be the same if every general high school also provided courses in such subjects. Certainly the administration of mechanic arts courses in other cities is far different from what it is in New York City."

Main Subjects Pursued Less Intensively in New York.

The offering in the high schools is pursued with less intensiveness in New York City than elsewhere: in English, history, civics and economics, mathematics, natural science, commercial subjects, industrial subjects for both boys and girls, and music.

(a) *English*—Seven of the ten cities under consideration offer more work in English in the aggregate than New York, and three offer less. * * * In comparison with practice elsewhere, therefore, the work in English in New York City lacks intensiveness.

(b) *History, Civics and Economics*—In history, civics and economics New York City is considerably at variance with common practice elsewhere. Almost without exception the ten cities whose courses have been analyzed provide four years of work or more in this department. In no instance are only two periods per week devoted to any course as in New York City. * * * In comparison with the practice elsewhere, therefore, the omission in New York City of all work in history in the first year, and the assignment of only two or three periods per week to each course, except American history and civics, make work superficial. Eight of the ten cities exceed the aggregate offering in New York, one equals it and only one is exceeded by it.

(c) *Mathematics*—In respect to the intensiveness of the offering in mathematics, seven cities provide more periods of work in this department than New York City, and two provide fewer periods. * * * It is to be observed, therefore, that New York City in providing courses that are assigned only two periods per week finds little support in other parts of the country.

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(d) *Natural Science*—New York City ranks below practically every other city in the intensiveness with which the separate courses offered in natural science are pursued. In respect to the aggregate offering in natural science, New York City takes middle ground among the other cities providing fewer periods in the aggregate than five cities, but more periods than the other five cities.

(e) *Commercial Subjects*—In commercial work eight of the ten cities exceed the offering in New York City, and, in most cases, by more than 50 per cent. * * * In comparison with the intensiveness with which commercial branches are pursued in the general course elsewhere, the New York City offering of a total of thirteen periods distributed among four courses is obviously not commensurate with general practice.

(f) *Industrial Subjects*—That the general course in New York City is particularly weak in industrial work, is clearly shown in the report of Dr. Davis. No such courses are provided for boys, and the offering for girls is limited to a single elective course in cooking. New York City makes no provision whatever in the general course for work of this kind, and, hence, furnishes no basis for comparison.

(g) *Foreign Languages*—The aggregate amount of foreign language instruction offered in New York City exceeds every other city studied in the Davis report. In this single field of study alone the City of New York leads all other cities. In practically every high school system including New York, the intensiveness with which such languages as Latin, German and French are pursued differs little. Italian is found only in the New York City course of study.

Types of Pupils Entering High Schools.

Dr. Davis subdivides high school pupils into the following six groups:

- (1) Those who intend to enter college.
- (2) Those who intend to enter higher technical or engineering schools.
- (3) Those who intend to secure positions of leadership in business.
- (4) Those who are fitted only to occupy subordinate positions.
- (5) Those who intend to become elementary school teachers, mostly girls.
- (6) Those who know that they will not be able to complete the four-year course and who intend to leave after a short time to enter business.

"These are the six types of pupils who ordinarily enter the New York City high schools with definite aims and purposes," according to the report. Dr. Davis says: "If our democratic ideas are to be approximately realized, definite provision for all these classes is both just and imperative. The aims of the school system must always determine the subject matter to be taught and the methods of instruction."

How to Organize the High School Course.

Educational theory and common practice throughout the country support the principle of

organizing high school education into the following two categories:

(1) General curricula to serve that large body of pupils who, at the outset of their high-school work, do not know their own points of strength and weakness, who are not forced by necessity to select at once a calling in life, and who have no well-defined educational ambitions.

(2) Special curricula to serve those pupils who have more or less fixed or predetermined plans, based upon individual capacities or ambitions or determined by social conditions outside of the individual himself.

Whereas, Dr. Davis commends the general plan of organization of the high school system of New York City, he does not approve of the actual administration of that plan.

Special Administrative Recommendations.

To render the administration of the New York City high school course more flexible, and therefore more serviceable to a larger number of boys and girls, Dr. Davis recommends:

- (1) That the prescribed subjects offered in the high school should not exceed 55 per cent of the requirements for graduation.
- (2) That principals be given greater authority to adjust the course of study to local needs and to the needs of individual students.
- (3) That principals and teachers be encouraged to make careful studies of their community needs and to recommend desirable modifications in the course of study to be employed in their particular schools.
- (4) That each pupil be required to take at least three years of work in some subject or department other than English before graduation.
- (5) That foreign language study and mathematics be not included in the absolute prescriptions for graduation, but that an alternative choice of these two subjects be permitted and that, on the advice of the principal, neither be prescribed.
- (6) That the only absolute prescriptions of subjects shall be:

	Prescribed for.
(a) English	Three years
(b) Introductory Social Science	One year (A new course suggested by Dr. Davis in civic and vocational guidance.)
(c) United States History and Civics	One year
(d) Manual training for boys	One year
Domestic science for girls	One year
(e) Natural science	One year
(f) Physical training	Four years
(g) Music	Two years
(h) Drawing	Two years

Finally, Dr. Davis advises extending the scope of work in each type of high school, giving the academic subjects a decided technical bent, and making them more intensive, permitting in the third and fourth years individual specialization, and lastly, encouraging the organization of special courses and special curricula to meet the needs of pupils whose stay in school must be short.

Commercial Courses Criticized.

Dr. Frank V. Thompson of Boston, Mass., has recently rendered a report on the commercial courses offered in the public schools of New York City. He characterizes the work as tending to give a false and inadequate conception to pupils of the study of commercial subjects.

The report declares that the commercial high schools and commercial courses in other high schools have a tendency to make clerical employees which only constitute about fifteen per cent of the demands for positions in business offices.

In regard to the administration, Mr. Thompson finds that there are too many subjects, too few recitations by subjects and that the courses are too academic. Many of the teachers are without commercial experience and therefore cannot teach the students from the results of their own experiences.

Another point which is brought out in the report is that there is no attempt made to differentiate the training of boys and girls and no organized effort is put forth in the matter of vocational guidance. On the other hand, the custom has been to combine with commercial education preparation for higher educational institutions, two things which cannot agree in their administration, preparation of work or results.

The separation of sexes is urged and a plea is made for an expansion of the commercial work so that it may emphasize the larger and more important aspects of commercial activities such as merchandising, salesmanship, business organization and advertising.

New Textbooks for Louisiana.

Governor Hall of Louisiana, who is ex-officio a member of the State Board of Education, T. J. Butler and Superintendent Harris have been named as a committee on textbooks. This committee will select a sub-committee of five practical educators to examine and report upon such high school textbooks as may be submitted for use in the public schools during the next six years. The sub-committee will meet in Baton Rouge July 1 and will enter and grade the textbooks submitted. It is required to make a sealed report to the Board which must be placed in the hands of the State Superintendent by July 12, who shall deliver it with seals unbroken to the board at the next meeting following. All agents or other persons interested in the sale of textbooks are to be excluded from the deliberations of the committee and none of the members of the committee are to have any interest whatever in any textbooks. The deliberations of the committee are to be strictly confidential among the members.

The textbook committee is also to appoint a sub-committee of three educators to examine and report upon library books that may be submitted for use in the public schools. This committee will meet in Baton Rouge July 7 and must also place a sealed report in the hands of the State Superintendent by July 12.



On the Road to Health VIA The Open Air School

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Tea. From Grower to Consumer. By A. IBBETSON. The author is well known in the tea world through his connection with the important house of Messrs. Joseph Travers & Sons.

Coffee. From Grower to Consumer. By B. B. KEABLE. Mr. Keable, like Mr. Ibbetson, is in the well-known house of Messrs. Joseph Travers & Sons, and can substantiate his claim to be an authority on coffee.

The above works have been adopted by the Philadelphia Board of Education and are used in the High Schools of that city.

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Book Reviews

The Silver-Burdett Arithmetics.

By George M. Phillips, State Normal School, West Chester, Pa., and Robert F. Anderson, State Normal School, West Chester, Pa. Book I. 366 pages. Book II. 286 pages. Silver, Burdett & Co., New York.

Book One seems large, even though it contains material for four years' work. But there is no padding. A wealth of exercises in fundamental operations, business ways of making bills and counting change, practical conditions in the simple problems, are among its individual characteristics.

In Book Two the work has been so arranged that pupils obliged to leave school at the close of the sixth year shall have a practical idea of the business applications of percentage. Both books have great variety and much drill.

Asia.

By Ellsworth Huntington, Yale University. 344 pages. Rand McNally & Co., New York.

This is the first series of supplementary volumes of geography readers, with an attempt to give the picturesque side of geography. This work contains a series of useful maps, and many illustrations, many of which, however, are of no particular value or of much mechanical excellence.

A Source-Book of Ancient History.

By George W. Botsford, Columbia University, New York, and Lillie S. Botsford. 583 pages. Price, \$1.30, net. The Macmillan Co., New York.

The joint workmanship of the Source-Book of Ancient History by G. W. Botsford and Lillie Shaw Botsford, is excellent. It is especially intended, however, to serve as an auxiliary to Botsford's "History of the Ancient World," and the material is parallel to this textbook. The work is so excellent, that did space permit, we

would make a long review of it. Book I deals with the Oriental Nations, Book II with Greece and Book III with Rome. It is a treasury of information, and irrespective of being a mere source-book, it can be read and thoroughly enjoyed on its own account. It contains a full index.

The Teacher.

By Florence Milner, Detroit University School, Detroit, Mich. 281 pages. Scott, Foresman & Co., Chicago.

There are many—too many—books on the teacher and for the teacher. Most are too pedagogically technical, and not a few really pedantic. The Teacher, by Florence Milner, of Detroit University School, seems to escape all these faults. It is direct, concise, lucid, practical, and unassuming, and yet it contains an abundance of good, sound advice by a person who knows her business, and certainly, knows school-boy and girl nature. This is one of the few books of its kind that can be heartily recommended. The chapter on Integrity is eminently satisfactory.

A Primer.

By Emma Serl and Vivian Evans, Kansas City, Mo. 117 pages. Silver, Burdett & Co., New York.

The good times of little Sam and his sister May form a continued story. Their haps and mishaps are more than interesting, while their natural talks make expressive reading easy.

The slightly tinted paper harmonizes with the cover.

Famous Pictures.

By Charles L. Barstow, 12mo, cloth, 239 pages. Price, \$0.60. The Century Co., New York.

A small volume of much worth for children and for grown-ups too. The reproductions in the book are of the world's famous pictures which have an ever living interest. The author tells something of the qualities of a picture, and endeavors to impart some little idea of the painter's art. The book treats The Story of Painting, as divided into Portraits, Pictures of Child Life, Animal Pictures, Landscape Painting, Legendary and Historical Subjects, Sacred and Religious Subjects, Decoration and Genre (home-like) and Still-Life, Painting. There is a gloss-

ary, and appendix, both containing much summarized information, and an index.

Word Mastery.

For the first three grades. By Florence Akin, Pasadena, Cal. 124 pages. Price, \$0.25, net. Houghton Mifflin Co., Boston.

In "Word Mastery" is a gradual and orderly plan for training ear, tongue, eye, in word building. The book is large enough to provide work for the first three grades and broad enough in its scope to be used with any series of readers.

Berry's First Steps in Writing.

By J. H. Woodruff, B. D. Berry and H. W. Flickinger. Published by B. D. Berry & Co., Chicago.

Children using these books will learn to write under ideal conditions. Can there be better headlines than Lear's nonsense rhymes? Then each headline has for its very own a full-page, soft-colored, artistic illustration.

Elson's Primary School Readers.

By Wm. H. Elson. Book I. 159 pages. Book II. 191 pages. Scott, Foresman & Co., New York, Chicago.

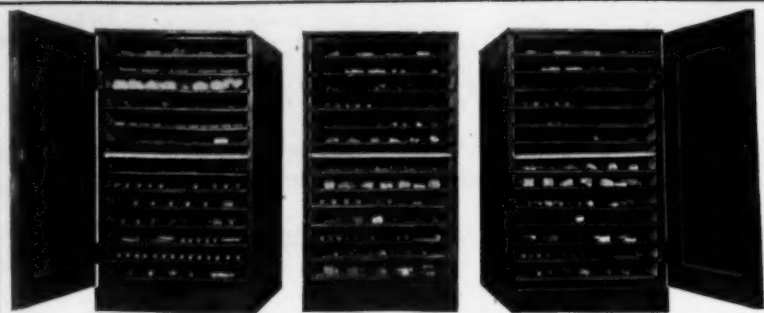
On the basis that what has delighted countless generations of boys and girls in all lands will delight the children of today, some classics have been retold in these readers. A catholic taste has guided the choice of selections. England, nearly every European country, far-off India, the folk-lore of our North American Indians have each contributed something fine in prose or poetry.

Delicate tints have been preferred for the illustrations. A simple but artistic border, not often seen in school-books, decorates the cover.

The Golden Path Book.

By E. H. Sneath, Yale University, George Hodges, Cambridge University and Edward L. Stevens, New York City. 280 pages. Price, \$0.45, net. The Macmillan Co., New York, Chicago.

A reader intended for the fourth grade, with the object of teaching morality by the indirect method. Notwithstanding the fact that one of the editors, George Hodges, is Dean of the Episcopal Theological School, Cambridge, the direct method is discarded. "The method of instruction involved in the scheme is the indirect method



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Why all this tremendous precaution? Is the fourth grade pupil better able to "do his own moralizing" than if he were helped by a judicious and conscientious teacher?

Thought-Building in Composition.

By Robert W. Neal, Massachusetts Agricultural College. 162 pages. Price, \$0.80. The Macmillan Co., New York, Chicago.

A very neat and handy little book as an aid to the method and mechanics of writing. There is also a supplementary division on journalistic writing as a means of practice. Newspaper writing when properly done has a style and a method all its own. Few textbooks on composition give instruction on this method of writing. This little volume combines the two. Chief attention is given throughout to thought-building, and the system appears thoroughly practical. It is a manual of practice, and not of theory, and contains an abundance of useful exercises.

Elementary Biology.

Animal and Human. By James E. Peabody and Arthur E. Hunt. 212 pages. Price, \$1. net. The Macmillan Co., New York, Chicago.

In this work on Biology—Animal and Human—the authors well say that "growing boys and girls ought to come to feel, as they have never felt, that they have in their keeping a most complex and wonderful piece of living machinery which can easily be put out of order or even wrecked. But, on the other hand, they should see that if the bodily machine is well cared for, it is capable of splendid work which may help to increase the sum total of human efficiency and happiness." For this reason alone, this work on biology, can be recommended. In addition to this the author's previous works have established their reputation along this particular line of science.

Experimental Studies of Mental Defectives.

By J. E. W. Wallin, University of Pittsburgh. 155 pages. Price, \$1.25. Published by Warwick & York, Baltimore, Md.

These studies represent some of the results of psychological anthropometric investigations of epileptics in the New Jersey state village for epileptics at Skillman from October, 1910, to and including May, 1911. The author gladly gave this time and work to a critical examination of the Binet-Simon scale of intellectual development, because this scale has recently been victimized by the indiscriminate exploiter. Thus "it is well worth the while of science to point out its legitimate uses as well as its limitations and its present imperfections."

It is not possible to give here the graph and tables showing the classification of 333 epileptics and 378 feeble-minded gained through using the Binet-Simon system for eight months. But it can be said that these tests were grouped in series and given regularly. The same tests were also given to about one hundred pupils in a near-by public school. In this way a standard of comparison was obtained. Interesting and significant results were obtained. Some tests proved too difficult for the age to which they were assigned, while others proved too easy. These results were often compared with those

obtained by workers in other countries. From these data it would seem that nationality must often be taken into account as a modifying factor.

These opinions are expressed as resulting from these studies: (1) The Binet-Simon system, while not as yet maximally accurate, approximately locates the mental station of the individual; (2) the limitations and imperfections of this system can be made known only by thorough-going work by experts on large groups of individuals; (3) the function of the Binet-Simon or any similar system, is to give a preliminary not a final rating of the individual tested. It gives only a starting point.

The book is one more expression of the patient work of science for the betterment of the diseased and the deficient.

Our Presidents and Their Office.

By William E. Chancellor. 603 pages. Price, \$3. net. The Neal Publishing Co., New York.

What manner of men have our presidents been? What manner of men should they be? What difference does it make who the president is? Does the present system work well?

An attempt is made to analyze and answer these and other questions in the present book, but the impression grows, on a second reading, that the author lacks the judicial poise, and perhaps, a sufficiently mature judgment to impress his readers as having the historic-critical spirit of the historian. There is much that is brilliant, yet withal unsatisfactory—"news itemy"—rather than satisfying to the student of history. The writer has a somewhat epigrammatic style, and while the work never wearies, it does not exactly satisfy. There are some passages iconoclastic of cherished traditions. The work is embellished by an introduction by Champ Clark. It is divided into three parts. The first gives a succinct history of the presidency, the second deals with presidential powers, and the third is a compendious history of the lives of the presidents.

A Handbook of English for Engineers.

By Wilbur O. Sypherd. 314 pages. Price, \$1.50. Scott, Foresman & Co., New York, Chicago.

As higher institutions of learning are becoming more definitely specialized there is becoming apparent a need for a more intensive and specialized study of English as applied to the needs of the student. This specialization has produced textbooks on journalistic writing, on business English, and on general technical composition and in the present volume on writing for engineers.

The book has been primarily prepared for engineering students; to give them a definite interest in the study of English composition, to acquaint them with the forms of composition which they will use in their daily occupations, to present the principles which underlie writing especially such as they require and to give examples of the best in technical composition. A second purpose has been to provide for the active engineer a handy manual which he might keep in his desk and consult just as he consults his engineering manuals or his logarithmic tables. In this latter purpose the book is no less successful than in the former. The opening chapters take up the general problems and the "mechanical" details of engineering writing. The special forms of letters, reports, and technical articles are next discussed very complete-

ly and in detail. Much useful information for preparing manuscript, proofreading, examples of faulty paragraphing, sentence formation, lists of misused and misspelled words, and a bibliography are added in several appendices. Throughout, the book is concise and clean-cut, very brief, yet complete. The author thoroughly understands his readers and their needs and has avoided those pedantic, impractical methods found in general textbooks. The book merits wide use.

Elementary American History and Government.

By James A. Woodburn and Thomas F. Moran. 468 pages. Longmans, Green & Co., New York.

This history emphasizes the social and industrial progress of the United States, and covers the principal events in the course of our colonial and national development from the discoveries of Columbus to the present time. An attempt is made in this work to combine the teaching of American Government with American history, two subjects so intimately connected that they should not be separated. The book is intended for the grammar grades.

TEXTBOOK NEWS.

A symposium of the leading exponents of the three leading "schools" of kindergarten on the theory and practice of the modern kindergarten has just been published by Houghton Mifflin Company. This volume, entitled "The Kindergarten," is the work of Susan Blow, Patty S. Hill, and Elizabeth Harrison, assisted by the other members of the Committee of Nineteen of the International Kindergarten Union appointed in 1903 to formulate contemporary kindergarten thought.

The school board of St. Joseph, Mo., has won in the suit instituted against them by Orville Sutton to restrain the board from changing the geographies at present in use in the schools.

Mr. Sutton alleged in his petition that the change would mean an added expense to him and other patrons of the schools. The court declared that the testimony of Superintendent J. A. Whiteford was sufficient for denying the petition on the grounds of financial loss.

Supt. Whiteford pointed out that the change in books was planned so that no pupil would have to buy a new book until he had finished the present one, and that the old books could be exchanged for the new ones.

The possibilities of making considerable savings through the rebinding of old textbooks are demonstrated in the semi-annual report of the supply commissioner of the St. Louis board of education.

An actual saving of \$6,371 is shown by him to have been affected during the first half of the present year 1912-13. The bindery department of the school board handled during that time 17,512 books at a total expense of \$1,903. The average cost of rebinding books was 10.86 cents. A statement of the supply commissioner for the past five years shows that a similar saving has been made each half year. The board of education is convinced that the bindery is an almost indispensable adjunct to the administration of the present textbook system.

Among the latest additions to the Riverside Literature Series is a volume of Southern poems edited by Professor Kent of the University of Virginia. These selections have been made partly to illustrate its chronological development, but mainly to portray Southern life and sentiment in poems of individual literary merit.

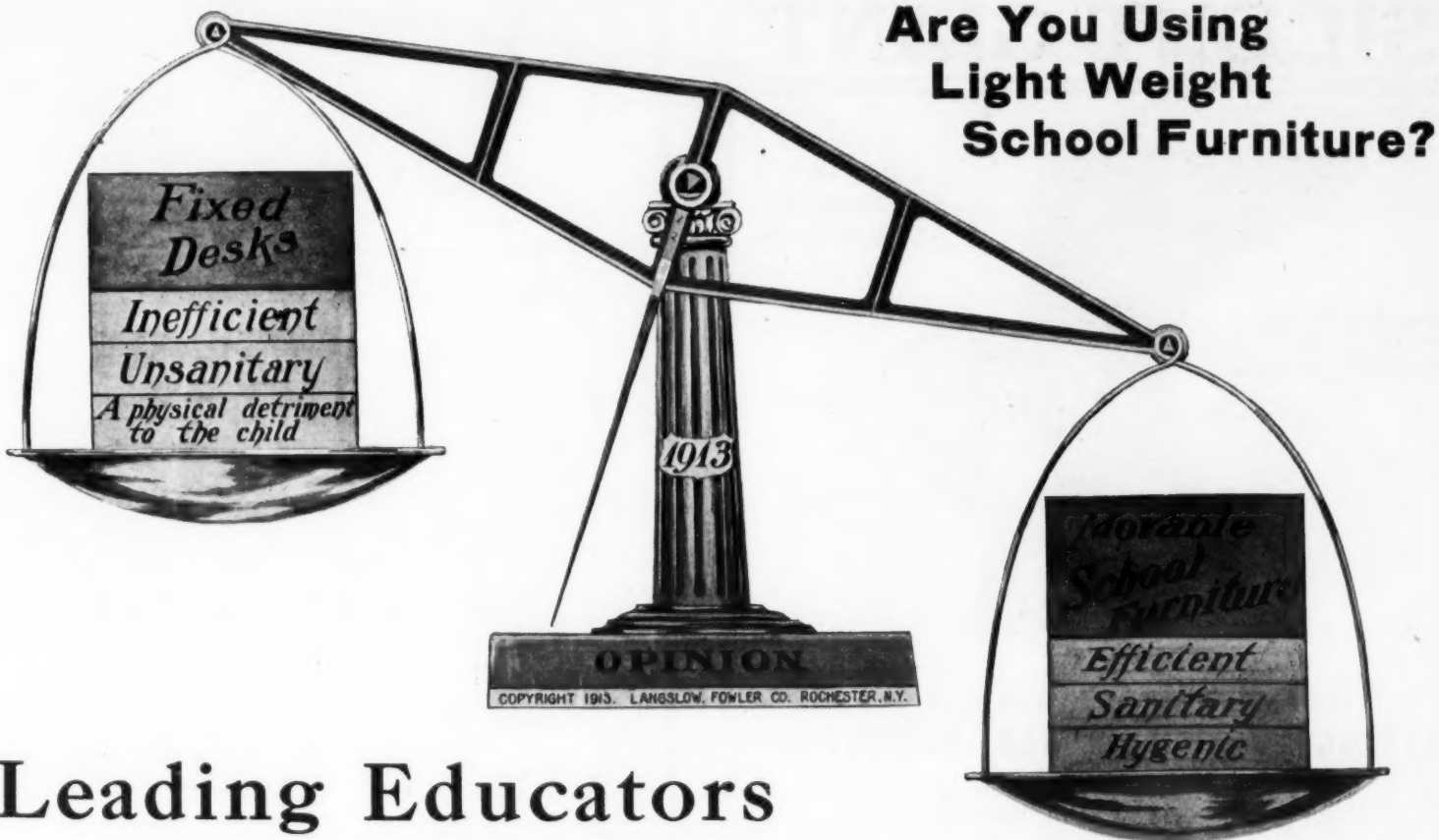
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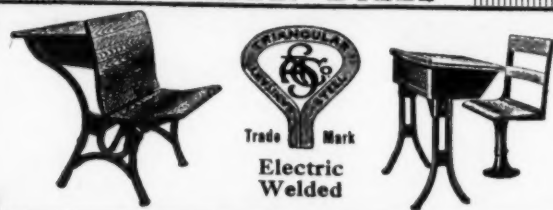
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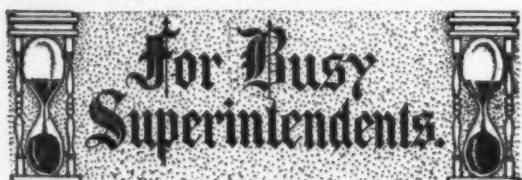
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Supt. W. C. Greeson, of Grand Rapids, Mich., has taken up with the merchants of the city the matter of providing work for high-school students during their leisure hours. It is thought that in this manner a great many will be able to secure an education who otherwise could not continue in school.

Supt. L. W. Mayberry, of Wichita, Kans., favors the grading of pupils on homework. Mr. Mayberry does not believe the pupils should receive a better grade because of the small tasks performed but that the work in the home should be taken into consideration in calculating the averages.

Supt. Charles E. Chadsey, of Detroit, Mich., is in favor of Sabbatical Years for teachers in the local schools and is confident that the board will adopt the scheme when it is taken up for discussion this spring. The cost is expected to be small to the board as teachers would be on half pay and substitutes could be engaged to do the work during the time that salaries otherwise would be paid. If the plan is adopted all teachers who have served seven years will be eligible but Dr. Chadsey does not believe that there will be any crippling of the teaching corps due to large numbers absent at one time. Those who are granted the year's leave of absence must fulfill their part of the agreement and will not be able to waste their time.

Mr. Edwin S. Monroe has been re-elected superintendent of the public schools of Muskogee, Okla. Mr. Monroe enters upon his fifth year in the local schools. The public schools of Muskogee have an enrollment of over 6,000 at the present time and a teaching corps of 140. The school plant is valued at a million dollars, and the monthly payroll for education amounts to \$10,545.

During the past few years a high school has

been erected at a cost of nearly \$300,000 and four ten-room ward buildings; also, ground has been broken for an addition to the high school to cost \$130,000.

The practical aspects of school work consist of complete courses in manual training and domestic science in both the high school and ward schools. Elementary handwork is also taken up to some extent. The schools also employ supervisors for the music and physical training departments.

Cleveland, O. Supt. J. M. Fredericks has recently approved a plan devised by Assistant Superintendent Rannells for a follow-up system to determine the reason for pupils withdrawing from school. In the future a record will be kept of about 1,000 pupils now in the seventh grades of the schools in charge of the latter. The records will cover a period of six years and will enable the school authorities to find out why pupils leave school and what they do after they have left the schoolrooms.

Supt. J. M. Greenwood of Kansas City, Mo., has recommended that open-air classes for tubercular and anaemic pupils be established. Mr. Greenwood declared that anaemic children are the greatest cause for worry since tubercular children are more often cared for by charitable and local civic societies.

In the opinion of Supt. J. F. Kimball, of Temple, Tex., the gravest problem of school statesmanship that the state of Texas faces at the present time is the betterment of rural schools, and the present method of choosing and retaining county superintendents stands like a bar across the path of the permanent betterment of these schools.

The greatest single betterment that could be desired in the country schools, according to Mr. Kimball, would be to place the office of county superintendent in the same position now occupied by city superintendents, to make it a business to which a man might aspire as a life service knowing that his work in its scope and quality might win for him promotions elsewhere. If conditions in any county were not satisfactory to him, he would have at least the whole state in which to offer his professional services. Until this point is reached in Texas educational

affairs it is held there is small hope for a permanent, positive improvement in the rural schools.

Scientific selection of proper vocations for pupils in the Chicago schools is proposed by the board of education. With this purpose in view, a new position has been created, that of district superintendent of vocational training and guidance. It will be filled by William M. Roberts, now an assistant superintendent.

He will make a study of industries which students may take up and act as an ambassador between employers, the public school system and the labor unions affected by the new plan. In commenting on the position to be occupied by Mr. Roberts, Superintendent Young said recently:

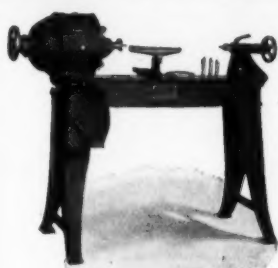
"It has generally been considered that our responsibility ceased when the student left school. Now we are to make a study of the various industries which a student may take up.

"We have certain divisions in the schools where we emphasize industrial or prevocational work. The thing for us to do now is not simply to teach the boys or girls woodwork or sewing, but to find out what other branches of industry they are likely to enter.

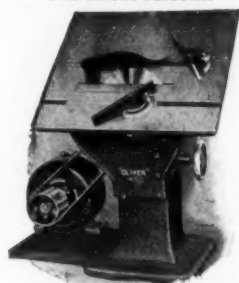
"Mr. Roberts will have this work in charge. He will go about among manufacturers who have apprentices and lay before them our willingness to undertake continuation work in the high schools for these apprentices. He will also communicate with the labor unions."

The Michigan state department of public instruction has recently distributed a number of bulletins emphasizing the need and the value of oral arithmetic and language work in the public schools. For the past few years the department has persistently urged the merits of these phases of the work, and while teachers and school officials have seen the value of the idea, they have not been able to adopt the methods in all the schools.

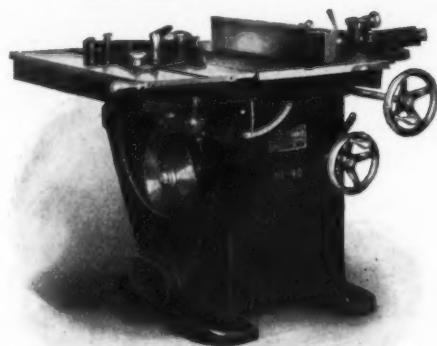
The department has come to the assistance of the school officials by the distribution of these pamphlets. Detailed assignments of lessons and methods to be followed are given for the work in the third, fourth, fifth and sixth grades. The mental work makes it possible for pupils to see things accurately, to do work quickly, to learn



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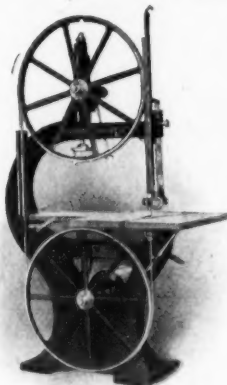


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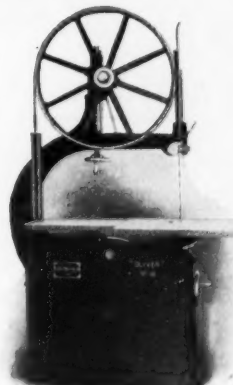
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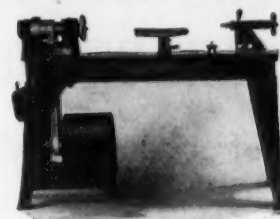
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QUALITY

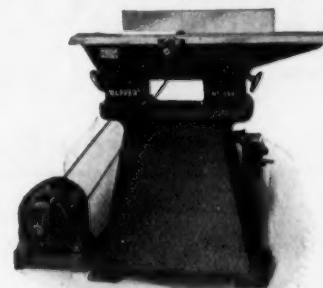


No. 16. Band Saw.

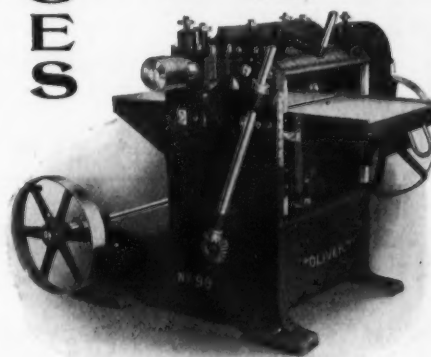
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The new state course of study cuts down considerably the time spent in arithmetic, reducing the number of years of this work from eight to six and eliminating the subject from the first grade. Oral arithmetic is to be given until the fifth grade after which a textbook may be introduced.

The state of Pennsylvania is making rapid strides in its provision for the health and comfort of the school children of the commonwealth. There has lately been instituted a movement for making the children familiar with the masterpieces of art and music so that they may come to have a fuller appreciation and a deeper enjoyment of these luxuries.

Along these lines, Philadelphia has installed two circulating art exhibitions under the auspices of the local Academy of Fine Arts. These exhibitions remain in a school one week and are then removed to other buildings.

Williamsport, another city in the "Keystone State" has installed victrolas in the schools. A certain length of time each week is devoted to the masterpieces in order that the children may become well acquainted with the world's best musicians.

Grafton, N. D. A very successful Farmers' Institute has been held for three days under the management of the high school and Superintendent F. L. Whitney. There were ten speakers, outside of those from the high school, and the aggregate attendance for the five programs reached 1,800, with 500 at the Thursday afternoon meeting. Mr. E. J. Trosper is in charge of the Agricultural Department. Among other activities, he is managing a Cow Test Association of eighty cows with the boys of the agriculture class as testers and a contest in alfalfa plots of three acres each for which already some sixteen farmers have enrolled.

Supt. F. L. Whitney, of Grafton, N. D., has reorganized grades seven and eight in the public schools into a Junior High School on the departmental plan. Six teachers have charge of the work in the various subjects, including in-

dustrial subjects and the work is differentiated along two principal lines for those who are more handminded and for those who are preparing specifically for high school and for college.

The school committee of Boston, Mass., has rescinded its rule barring the employment of women day-school teachers in the evening schools. Quite a number of the teachers are availing themselves of the extra work and compensation.

Duluth, Minn. The garden movement which was begun last year has been extended this year. It is proposed to have the contest extend throughout the city and to award prizes to the school children which shall approximate \$100.

An active campaign is to be conducted for an agricultural expert who shall be hired by the school board for one month. The expert must devote his time to delivering addresses in the schools and also conduct several experimental gardens. The expenses would be nominal and the results large.

Kansas City, Mo. The work in experimental garden work at the Westport high school will be enlarged this spring by the important branches of farming outside of stock-raising. The soil will be treated not only for small vegetable growing, but the instructor will teach how to grow wheat and corn. It is expected that in the future a complete course in farming will be added to the curriculum of every school in the city.

The school board of Kewanee, Ill., has requested the members of the graduating class to wear caps and gowns at the commencement exercises. A few of the students have opposed the board's decision and a committee will confer with the board upon the matter.

Dr. St. Clair McKelway, editor of the Brooklyn Eagle, has been elected Chancellor of the Board of Regents of the University of the state of New York. Mr. McKelway has served as Chancellor for a number of years during the residence of the late Whitelaw Reid in England. Dr. McKelway has been a member of the board since 1883 and was made vice-chancellor in 1900.

AMONG SCHOOL SUPERINTENDENTS.

Supt. A. J. Lovett has been re-elected head of the public schools of Blackwell, Okla.

Enid, Okla. Supt. T. W. Butcher has been re-elected for a three-year term at a salary of \$2,700 per year.

Rochester, Minn. Supt. H. A. Johnson has been re-elected for a three-year term. The salary was fixed at \$2,600.

Mr. William White Cottingham, for sixty years superintendent of schools of Easton, Pa., died on March 2 in his eighty-ninth year. Dr. Cottingham was a graduate of Lafayette College and took up teaching in 1852. The following year he became head of the public schools in Easton and held his position until his death. He was in point of service the oldest superintendent in the United States.

Danville, Ill. Mr. L. H. Griffith, superintendent of the public schools for the last fourteen years, has resigned his position, to take effect in August.

Argenta, Ark. Supt. D. L. Paisley has been re-elected for a third term.

Grand Junction, Colo. J. H. Allen, for eight years superintendent of the public schools, has been re-elected for the next three years.

Charles C. Root has been re-elected superintendent of schools at Bismarck, N. D. The salary was increased to \$2,000.

Enid, Okla. Supt. T. W. Butcher has been re-elected for a three-year term. Mr. Butcher's salary is \$2,750 per year.

Topeka, Kans. C. C. Starr has been re-elected superintendent of schools.

Seward, Neb. J. R. Fulk has been re-elected superintendent of schools for a three-year term. Mr. Fulk's salary was increased \$300.

Adrian, Mich. Supt. Chas. W. Mickens has been re-elected with an increase of \$200 in salary.

St. Cloud, Minn. Supt. C. H. Barnes has been re-elected. His salary has been fixed at \$2,700.

Mankato, Minn. Supt. F. J. Sperry has been re-elected. Mr. Sperry's salary has been fixed at \$2,100.

Stanford, Ky. Supt. J. W. Ireland has been re-elected for a term of two years.

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NEW SCHOOL-BOARD RULES.

Salina, Kans. School officials and mothers of girl members of the high-school graduating class have come to an agreement on the question of dress. The girls will be obliged to secure dresses of plain white material, with a little inexpensive trimming. A choice of two styles of making is given. Long white gloves of any desired material may be worn in connection with the dresses.

New York City. The rule relating to the exclusion of children who are suffering with a contagious disease has recently been explained by Superintendent W. H. Maxwell. The teachers are authorized to exclude children in these cases when presented with a certificate from the board of health. If, however, a teacher has "trustworthy evidence" that a pupil is suffering from a contagious disease, or has been exposed to contagion, she is justified in excluding him, even before a formal certificate from the health authorities has been received. Several teachers and principals labored under a misconception of the rule in that they would act only when in possession of the certificate.

Supt. A. M. Douglass of Logansport, Ind., has recently called the attention of the teachers to the rules governing the suspension of pupils.

The rules require that teachers report to the principal and also to the parent whenever a pupil shall be suspended. The causes for the suspension must be stated.

In executing a suspension order the teacher is urged to keep in mind the pupil's temperament, maturity of judgment, home conditions and past conduct. The teacher must exhaust her powers of influence before taking the more severe measures. She must also fix the conditions for reinstatement which must be fulfilled by the pupil and parent.

Fire drills are required in the grade schools of Hutchinson, Kans., at least once a month. The high school is exempt by reason of its fire-proof construction.

Carthage, Mo. The school board has retained its rule which prohibits the absence of pupils during school hours for the purpose of taking music lessons. The board was evenly divided on the question, part of the members being in favor of rescinding the rule and part of them

contending that parents should adjust themselves to suit the decree of the board.

Anderson, Ind. The school board has issued an order forbidding absolutely all smoking in school buildings. The rule was passed following a serious fire which it is believed was caused by the dropping of a lighted cigarette.

The school committee of Malden, Mass., barred the wearing of white dresses and new black suits at the grammar-grade commencement exercises which were held recently. The board was of the opinion that the purchase of new clothing, with the high cost of living, was a great burden to the parents. Flowers and gifts were also prohibited.

Topeka, Kans. The board of education has passed a rule that commencement speakers must limit their addresses to one-half hour.

The school board of Waupaca, Wis., has passed a rule that pupils who violate the rule against smoking shall be prohibited from representing the high school in any athletic, oratorical or other contests.

The school board of Los Angeles, Cal., has passed a rule prohibiting employees from selling salary warrants to brokers or collection agencies. The violation of the rule is considered sufficient cause for dismissal.

The Milwaukee board of school directors has adopted an amendment to its rules providing that janitors shall receive no extra compensation for attendance and services at afternoon or evening school activities.

Los Angeles, Cal. The board of education has passed a rule prohibiting janitors from disposing of their future salaries to loan sharks. It has been found that the men assign their salary to loan brokers for all or a part of the term, thus securing money in advance of the regular pay-days.

Public Use of Schools.

Oakland, Cal. The school board has passed a set of rules governing the use of school buildings for public use after school hours. The rules prohibit smoking, dancing and the giving of entertainments for money without the board's consent. Rates of payment are as follows:

1. For a meeting in the daytime in any of the ordinary school rooms or basement rooms or rooms fitted up for occupancy of clubs, \$1.00 per meeting, evenings, \$1.50.

2. For a meeting in the Chabot assembly hall or in the assembly hall of the Fremont high school or in any other assembly hall, daytime, \$1.50 per meeting, evenings, \$2.50.

3. For occupancy of the gymnasium for play purposes, daytime, \$1.00 per meeting, evenings, \$1.50.

In explanation of these rules, Superintendent of Schools McClymonds said recently:

"Of course it is not intended to permit the regularly used class rooms to be used for such purposes. Rule 1, of the schedule of prices, intended to compensate the janitor for his trouble, refers to the 'ordinary sized school room,' but not necessarily an occupied class room. In the new schools there will be quite a few ordinary sized rooms which can be available.

"Smoking and expectorating at these gatherings are tabooed, and I think this will tend to discourage the holding of regular political meetings in the schools. These gatherings, I imagine, will be more in the nature of neighborhood or family affairs."

IMPROVING GRADUATION EXERCISES.

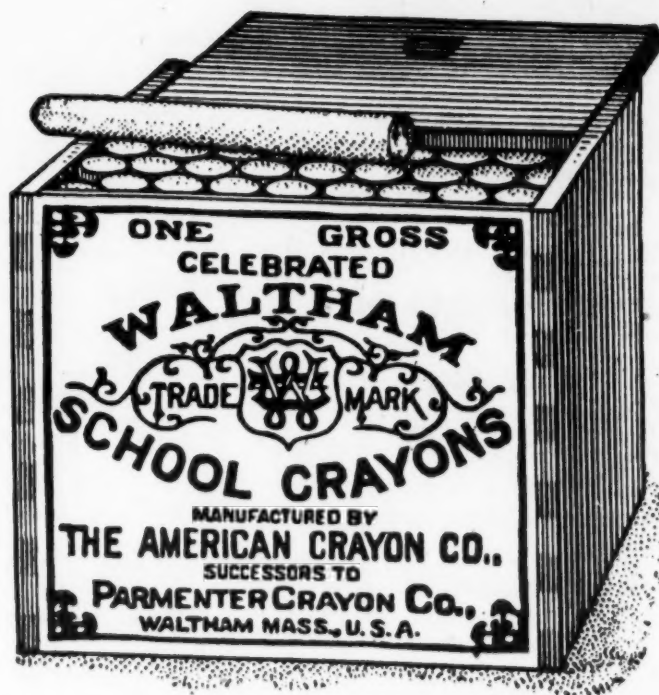
Moline, Ill. The school board has ordered caps and gowns for the high-school graduates. The aim of the new movement is to remove the cause of strife regarding commencement dresses.

The school board of Hazleton, Pa., has compromised on the subject of caps and gowns for the graduating class of the high school. Parents have been urged to economize on wearing apparel for the students and thus create a reform in this direction.

The students of the senior class of the high school at Brazil, Ind., have adopted a resolution which limits the cost of the graduating dress to \$5.00. The students' decision has won the approval of the school authorities and parents.

The girl students of the South High School at Worcester, Mass., have recently voted to reduce the expense of graduation. Each girl will wear the same dress for class-day and graduation exercises. Class pictures have also been dispensed with except in the case of the large class picture. It is expected that by this method every student will have a picture of the whole class without going to the expense of securing fifty or a hundred of the individual photographs.

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VOCATIONAL EDUCATION NOTES.

The state of Pennsylvania at the present time is in need of a special appropriation for vocational training in the schools. It is proposed to extend the present school system in the event that extra equipment is required for the work.

The school code makes provision for expert supervision over industrial and agricultural departments of education and encourages the organization of such schools and classes. The aim of this work may be summed up in the following stated needs: (1) To secure more efficient men and women in the industrial and vocational walks of life; (2) To hold in check during the adolescent period boys and girls who react adversely to book training and who eventually leave for one reason or another; (3) To prevent this body of young people from entering occupations or work where arrested development is the price of early employment and later growth in efficiency is stunted.

Agriculture has been added to the curriculum of every rural eighth grade in the state of Michigan. Textbooks have been provided and examinations will be given in the subject in the spring. Corn clubs which have been organized in various parts of the state have been a decided aid to the study of agriculture and the interest which the rural school children have shown in these clubs and the results of the corn-raising have been convincing proof that the new subject is not unwelcome to the students. Parents and progressive farms have also co-operated toward making the work effective.

Last month the department of public instruction at Buffalo, N. Y., opened the first of several schools which have been planned to afford vocational training for girls. The principal subject offered is salesmanship and the first requirement made of an untrained girl is that she master the store system. It is planned to help the girl in the bundle station to learn how to sell goods as well as to tie them up; the girl who is already selling goods will study selling as an art rather than an automatic displaying of merchandise. The main purpose is to raise the individual standard of efficiency, not only in the store but likewise in every situation of her life. Schedules will be arranged between 8:30 A. M. and 5:30 P. M., daily, except Saturday, when the session will close at 11:30.

The appropriations committee of the state education department of Pennsylvania has been asked to set aside a fund of \$100,000 to conduct adult schools. The fund is to be expended in an effort to reduce illiteracy on the part of parents who are unable to read and write and who have a desire to learn.

Kansas City, Mo. Gardening and farming on a small scale have been introduced at the Westport high school. The work includes such subjects as soil composition, fertilization, seed tests, obnoxious bugs and weeds and actual problems in cultivation. Seventy-two pupils have enrolled for the course.

A greenhouse is to be built this spring. Government bulletins will be studied largely and the pupils will learn the cost of all supplies used in the work.

Westerville, O. Bookkeeping has been introduced in the high school for those who do not expect to enter college.

Highland Park, Ill. A first-year course in vocational guidance has been opened in the high school. The course is designed to aid students in selecting the subjects of the next three years with special reference to their life work.

Sinclairville, N. Y. Extensive agricultural experiments will be instituted on the 43-acre farm recently turned over to the high school by the state. The high school is the only one in the state that has a full vocational course and a farm provided by the state for experimental work. About thirty students are taking the course.

MANUAL ARTS STUDIES.

Cambridge Mass. Forty young women have been enrolled in the new trade school for girls since it opened its doors in February. Four teachers are employed in the school and the course includes dressmaking, millinery, cooking and home economics.

Philadelphia, Pa. The experimental introduction of manual training in the elementary schools has yielded such good results that eleven additional schools have been designated for the introduction of the study. The action was taken as a result of the recommendations of Supt. M. G. Brumbaugh.

It has been found that the addition of these eleven new shop centers will place the advantages of manual training before every boy in

the seventh and eighth grades of the public schools, with the exception of a few who attend small outlying schools and the schools of practice.

The aim of the work is to conduct the classes in such a way that the boys may be enabled to attend school two years longer and at the same time make some progress toward a trade, with some guidance toward the selection of a trade. In other words, the elementary education is designed to help fit the boy for bread-winning.

The report of the Milwaukee school board for the month of February gives the enrollment and attendance in the regular seventh and eighth grades in cooking and manual training classes. The enrollment in cooking was 3,064 and average attendance was 2,876. In manual training the enrollment was 3,284 and the attendance was 3,180.

Parochial schools and private schools furnished an enrollment in cooking of twenty-four classes or 378 pupils, with an average attendance of 333. Twenty-one classes were enrolled in manual training work or a total of 341 pupils and an average attendance of 313 pupils.

Sewing and manual training have recently been introduced in the public schools of Washington, Ill.

Los Angeles, Cal. A class in automobile repairing has been opened in the Manual Arts High School. The pupils in this class will have charge of the twelve automobiles owned by the board and will be expected to keep them in repair and remodel them. A supervisor has been secured who will oversee the actual work in the repair shop.

Bismarck, N. D. Domestic science, manual training and commercial courses, which were recently established in the schools, will be extended next year.

Detroit, Mich. Supt. C. E. Chadsey is endeavoring to have nineteen additional schools equipped with manual training shops and domestic science laboratories during the coming year. In the budget for the year there has been included an item of \$49,000 for the extension of manual training bringing the total number of schools of this character to forty-nine. It is expected that the subject will shortly be taught from the fourth grade up.

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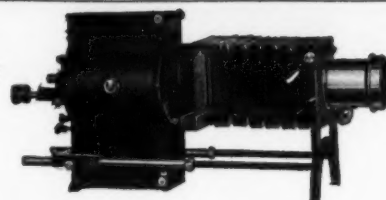


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School Room Hygiene

MEDICAL INSPECTION NEWS.

Salt Lake City, Utah. A recent report of the district nurses employed by the health department shows that excellent results are being attained in the schools. The report shows that twenty-five schools were inspected. A total of 180 children were examined of which twenty were excluded from school.

Permits were granted to twenty-six children who had been absent on account of sickness and twenty-three homes were visited where contagious diseases were suspected.

The Milwaukee board of school directors during the past month adopted a resolution accepting the offer of the Visiting Nurses' Association to supply the medical department of the schools with five trained nurses during the school year, and also one nurse for the two summer months for the sum of \$5,000 on the same arrangement as previously made.

The city authorities of Cambridge, Mass., have requested the public school authorities to meet the expenses for school inspection and school nurses. It is the opinion of the city that the school department should provide for the salaries paid at the present time and should become responsible for those which may become due.

The School Voters' League of Boston, Mass., has petitioned the city board of health to appoint a special corps of women physicians for the examination of girl students in the public schools.

The demand follows a peculiar situation which has existed since the appointment of the new corps of doctors. At this time several girl students requested that they be examined by a woman doctor and the superintendent thereupon announced that permission would be granted upon application. Many of the girls rather than make themselves conspicuous by reason of a special privilege have submitted to the existing conditions. The women doctors

would have charge of girls' schools and of the girl students in the mixed classes.

Boston, Mass. More than 30,000 school children who were last year suffering from physical defects have been restored to health through the work of the school physicians.

It is estimated that 30,031 of the 100,000 school children have been re-examined the present year. It has been found that 17,233 of these children were suffering from defects last year while 9,245 are free from the same due to the attention given them by their parents.

The smallest percentage of defects remedied was in teeth defections. The larger part of the children were found with diseases of the mouth. The opening of the Forsyth dental dispensary will be watched with interest as regards the correction of dental defects among poor children.

Pontiac, Mich. The school board has consented to appoint a school nurse to assist in the work of medical inspection.

SCHOOL ROOM HYGIENE.

Rock Island, Ill. The ventilation of classrooms in public schools recently became the subject of much discussion among the members of the school board. It was ordered that the windows in all classrooms be opened during the recesses and at the noon hour so that the air might be thoroughly changed. It was urged that pupils be requested to take as much exercise as possible during the recesses and that those who remain in the building take suitable exercise there.

The Buffalo aldermen have approved a bill submitted by the mayor authorizing the city to issue bonds to the extent of \$30,000 to meet the expenses of the fourth International Hygiene Congress, which will be held in that city next August. The bill does not bind the city to the expenditure of the money, but empowers it to provide such funds as may possibly be needed.

A bill is now before Congress calling for the appropriation of \$30,000 by the government and citizens of Buffalo have subscribed almost an equal amount. It is believed that the expense of the convention will be about \$40,000.

School and health authorities in the state of Michigan have for the past two years been carrying on a campaign for better sanitation and hygienic conditions in the public schools. The present year has witnessed an emphasis of the practical aspects of school sanitation by discussions at every school officers' meeting in the several counties of the state.

A recent outgrowth of the sanitation movement is the agitation in favor of more sanitary and comfortable rural school buildings. It is contended that out of 6,750 ungraded schools in Michigan, in which are enrolled more than 210,000 children, there are less than one-fourth which possess properly heated and ventilated schoolrooms. Only a small percentage have a sanitary water supply.

Another bad feature which is generally receiving condemnation is the continuous use of the common roller towel. In regard to school seating it is estimated that only one in twenty schools has proper seating equipment. Seats and desks are not adapted to the needs of the child who is therefore obliged to sit in a cramped position.

At the present time there is no authority vested in any official to close a school which is unfit for school use and the crying need just now is the passage of a state law which shall create the position of a supervisor of school buildings. Several states have already accomplished much in this direction through the authority which is provided by the state law in regard to violations of building construction.

Los Angeles, Cal. Paper towels have been tried for the first time in the public schools. It is estimated that 2,000,000 towels will be needed entailing an annual cost of about \$15,000.

The school authorities of Chicago are apparently making rapid strides in their attempt to rid the schools of contagious diseases. According to Louis E. Larson, secretary of the board, it is found that each day shows a decrease in the number of schools which must be fumigated to make them germ-free and clean. During the winter it was frequently necessary to employ

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as many as twenty-four men for this work, while at the present time only six are doing the same work.

Dowagiac, Mich. School officials and parents are conducting a campaign to banish smoking among the boys in school. It is declared that boys in the lower grades are being taught by their elders who set a bad example.

Berkeley, Cal. The appearance of several cases of smallpox caused a joint order by the city health and school authorities excluding all pupils not vaccinated. Fully 1,200 children have been excluded and steps have been taken by anti-vaccinationists to carry the question into the courts.

The school board of St. Paul, Minn., has sought the advice of the corporation attorney on its right to allow children who have had measles to attend school when the disease exists in the family. The school physician denied the right of children to attend under the conditions provided by the state law.

Menominee, Mich. The school board has voted to appropriate funds for the employment of a school nurse. The duties of the nurse will be instruction of the children in physiology and health matters generally, the care of those in ill health and instruction in hygiene.

The present year records no clear cases of pulmonary tuberculosis in the schools of Boston, Mass. Last year there were eighty-eight cases. Of these, fifteen have left the schools, eleven are in hospitals, three have died and five have not been accounted for. Fifty-four suspicious cases are receiving the attention of the school physician at the present time.

Open-Air Schools.

The state of Iowa is conducting an open-air school in connection with the Oakdale Sanitarium for consumptives.

Minneapolis, Minn. A new open-air school has been opened in the Bancroft school building. The attendance is about twenty but it is expected the number will eventually reach thirty-five or forty.

Fresno, Cal. Three open-air school buildings will be erected by the board of education.

Buffalo, N. Y. An open-air school is to be established in School No. 18. The school is for

the benefit of children who are threatened with tuberculosis and all candidates must be examined by the medical inspectors to ascertain whether they are suffering from a contagious disease.

Allentown, Pa. An open-air school will be established next year.

San Jose, Cal. A six-room open-air school is to be erected for the high school. The contract price was \$1,497.

DENTAL HYGIENE.

Pupils of the Council Bluffs, Ia., schools will have their teeth examined by the dentists of the city who have consented to make the examinations free. In order that they may not be bothered by too large numbers at one time, the pupils of each grade will go on Tuesday and Thursday during different weeks after school hours.

Each pupil who is to have his teeth treated will have triple records of his case made by the examiner. One slip goes to the parents, one to the principal and one is retained by the dentist. While the superintendent advises the examination, he is anxious to see many of the children receive the right treatment. By means of the slips the teachers and principals are able to tell just what condition the child's mouth is in and just what improvement is noted after treatment.

Detroit, Mich. School dentists report that about ninety per cent of the children in the public schools have defective teeth. Polish children appear to be the least familiar with the toothbrush as the per cent of defective teeth was 88 per cent.

The dental clinics which have been in operation since September reported the treatment of 4,847 children. A total of 2,691 teeth were extracted, 428 were cleaned and 1,295 cases of toothache were treated. Temporary fillings were made in 227 cases and 776 fillings with cement and amalgam were made.

The city board of health has asked for \$8,000 to carry on this work during the coming year. Last year \$5,000 was appropriated and a great deal of literature was distributed to school children and parents emphasizing the necessity of caring for the teeth.

The school board of Fredericksburg, Va., has accepted the offer of dentists and physicians of the city to give their services free for dental and medical inspection.

Cincinnati, O. A dental clinic is to be established in the new Guilford school which will shortly be completed. At present there are two in operation in different schools.

The dental clinic of the Milwaukee public schools reports that during the past month there were forty applications for free dental treatment of which thirty-seven were accommodated. Twenty-eight cases in which treatment had previously been started received the final treatments. The number of patients treated was 168.

PHYSICAL INSTRUCTION.

Syracuse, N. Y. The principal of the Central high school has formulated a novel plan for stimulating interest in school athletics and gymnastics. The plan is to reward regular participants in school games and contests with counts toward graduation such as are given for successful classwork.

Before entering the course, each student will be required to pass a physical examination. The course will include compulsory participation in gymnasium work similar to that required of first-year students at the university and class contests in which all students participate.

An extensive equipment will be required and the physical director must be a physician as well as an athlete. An athletic field is proposed with an open-air gymnasium, a locker building and a covered gymnasium for rainy weather.

Boston, Mass. Following the recommendation of the supervisor of school hygiene, the school committee has delegated to the superintendent the preparation of a course in physical training and hygiene for the girls of the trade school.

All applicants for positions as athletic instructors in the schools of Minneapolis, Minn., must pass an examination before they can be appointed. They must also be approved by the supervisor of hygiene.

Clinton, Ill. The board of education unanimously adopted a plan for the management of athletics in the high school that is followed by many of the leading schools of the state.

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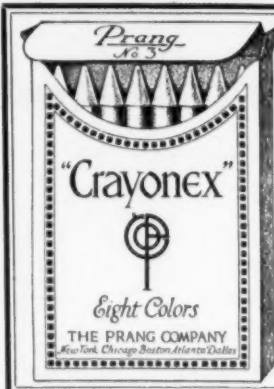
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SAVE life and liability insurance—Adjustable window platforms used while washing windows, painting frames or reglazing. Applied to any window in 25 seconds, removed in 10 seconds—will not mar casings or sills—will last forever and cost less than one insurance premium.

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Prang "Crayonex"

The secret of the excellent results obtained by the use of Prang "Crayonex" is due to the fact that they contain a minimum amount of wax. The colors blend and work over each other perfectly.

The secret of their popularity is due to the fact that the colors have been specially selected for school use.

The secret of their extensive use is due to their price.

Crayonex No. 3, eight colors, box \$.05
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Send for our new Art Catalogue

THE PRANG COMPANY
New York Chicago Boston Atlanta Dallas

The Collinwood Disaster



cannot be repeated when a school board provides the

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Spiral Slide**

Do you know its good qualities?

If you do not, write for prices and catalog.

Covered with 8 Patents.

Dow Wire & Iron Works, Inc.
LOUISVILLE, KY.

The Editor's Mail

SCHOOLHOUSE CONSTRUCTION.

To the Editor:—We are particularly interested in schoolhouse conditions, and beg your courteous interest in a few interrogatories as follows:

1. The names of cities that have made conspicuous improvements in the character of design and construction of schoolhouses?
2. Cities that have definite requirements for fireproof construction of schoolhouses?
3. Has the Collinwood school fire had a noticeable effect in the way schoolhouses generally have been built since the fire?
4. Approximately, how many public schools, also colleges, are there in the United States?
5. About how many children attend school daily; about how many students are quartered in colleges?
6. The best fire drill regulations you know of?
7. Anything else that occurs to you that you may think of interest will also be appreciated?

If answering any of these questions entails research, please pass it up. We believe that, with your wide general knowledge of school matters, answering the questions will not trespass too far on your courtesy.—I. G. H., New York, N. Y., March 13, 1913.

Reply.

Answer:—We shall answer these questions categorically and as well as information readily at hand permits. A general discussion would lead us too far afield.

1. The large cities of the country have, almost without exception, performed some service for the improvement of schoolhouse design and construction. Practically all of them have discarded their old school building standards during the past ten or twelve years and have fixed for themselves new standards which for safety, serviceableness, economy, durability and sanitation are unequalled by the schools of any European nation.

In brief, some of the conspicuous improvements which have been made in the past generation may be summarized:

New York City, through Mr. C. B. J. Snyder, has developed the "H" plan building; has standardized and simplified the construction and equipment of schools to a point unequalled elsewhere for economy, utility and durability; has originated and developed the fireproof "double-reverse" steel stairways; has reduced the area and cubic contents of buildings "per child" to a degree not equalled elsewhere, without reducing any desirable standards for health or safety; has taught the country a lesson in adapting the beautiful French and English types of the Gothic to school work; etc.

Chicago has developed some splendid types of elementary and high schools; has a very low cost of construction per room; has standardized plans for buildings so that they can be readily enlarged in growing neighborhoods; has developed some very original styles of exterior design.

Philadelphia has developed a so-called "unit plan" for its elementary schools which can be built in sections as the population grows; has introduced the Philadelphia fire-tower in its larger schools; has set a high standard for architectural design in which ornament has been introduced with practically no increase of cost; has just developed a new type of district high school.

St. Louis has won architectural fame through the schools designed by Mr. Wm. B. Ittner. He has set a standard for beauty in his adaptations of the late English Gothic and of the Italian and French Renaissance that has given the biggest single impetus for better design in the United States; has produced a type of elementary schools in which each corridor has direct outside light; has erected several large high schools which are models for the adaptation of building to administrative and scholastic requirements of the schools they house; has set a high standard for fireproof and sanitary construction and equipment.

Boston, through its Schoolhouse Commission, has accumulated perhaps the most valuable and complete body of data on school design and construction, including heating, ventilation, sanitary equipment and artificial lighting, of any city in the world. It has set, each year, a higher standard of construction for safety, permanency and utility, and by use of this data, has been able actually to reduce the cost of construction in the face of rising costs. The board has fixed standards of size of rooms, of additional desirable accommodations, over and above classrooms that are generally accepted. Of late, there has been a reactionary movement (wooden joists and floors) have been permitted in place of the first-class fireproof construction required universally by the old board.

Cleveland, O., has developed the finest examples of technical high schools in the country—a new kind of school with more shops and workrooms than classrooms.

San Francisco has developed an earthquake-proof type of concrete and steel schoolhouse that is fireproof.

Milwaukee has developed a type of two-story fireproof elementary school that is almost ideal for safety, economy, general usefulness and flexibility of plan.

Cincinnati, has set a high standard for grade and high schools. Has two remarkably complete high schools.

Newark, N. J., has worked out its problem of larger school accommodations in a most consistent, economical yet liberal manner. Has standardized details of its schools.

Des Moines, by employing one firm of architects, has developed a consistent scheme for fireproof, flexible, unit-plan schools.

This same may be said of Kansas City, Mo., Seattle, Spokane, Detroit, Toledo, Minneapolis, New Orleans, etc.

Oakland, Cal., has recently had a commission study the problem of schoolhouse construction and has a valuable report in hand. Will build one-story grade schools almost exclusively in the future.

Colorado Springs, Colo., is developing the cottage-group plan of schools, well suited to its climate.

Gary, Ind., has a type of schools which is the completest and most elaborate in design and construction, and which by a most highly scientific adaptation of building to school, and vice versa, is the lowest cost per child of any in the United States. A marvel for organization.

In the last analysis, the improvements in schoolhouse design in the cities just mentioned, should be credited to the architects who have been the leaders for better buildings. A record of progress during the past twenty years is not complete without a mention of C. B. J. Snyder of New York, W. B. Ittner of St. Louis, J. Horace Cook of Philadelphia, W. B. Mundle, D. H. Perkins and A. F. Hussander of Chicago, F. S. Barnum of Cleveland, R. C. Sturgis of Boston, Malcomson & Higginsbotham of Detroit, E. F. Guilbert of Newark, Chas. A. Smith of Kansas City, James Stephen of Seattle and E. A. Christy of New Orleans.

Collinwood Fire.

2. Very few cities have definite requirements for fire proof construction, in fact, none except New York, Chicago, Philadelphia, St. Louis, San Francisco, require schools as a separate class of buildings to be fireproof. In most cities, schools come under the general classifications and only where they contain assembly halls do the ordinances fix a higher degree of fire safety than ordinary buildings. (See answer to question number seven.)

3. The Collinwood fire has had a most wholesome effect. In Ohio, it has resulted in a most stringent building code, which so far as it applies to schools, is giving splendid results. In other states, the legislation has not been so good, but it is now universally required by law that schoolhouse doors open outward—a distinct if small advance. In general, there is more attention given to the matter of safety and practically all schools have fireproof boiler or furnace rooms, and many have hallways, stairs and exits of fireproof materials.

4. The most recent report of the United States Commissioner of Education for 1911, fixes the number of schoolhouses at 265,474 in 1909-10. This represents only a small increase over 1900 and it is quite likely that there has been no appreciable increase during the past three years. The urban schoolhouse of today is growing.

(Concluded on Page 45)

AN ORGANIZATION FOR SANITARY SERVICE

FOR some months we have been publishing in the "School Board Journal" a series of "advertisements" which were more editorial than otherwise. Their underlying thoughts were the health and physical development of the pupil. If you have read any or all of the series, you probably obtained good ideas from them.

If you did not read them, it will be worth while going over your files and doing so now.

This page is being used to tell you about our great Organization for sanitary service.

If you plan during the approaching summer months to improve the sanitation of your schools, you will need advice and equipment, therefore, we want you to know more about this "Sanitary Service Organization."

The number of persons employed by this Company is over 6,300. From those in the most humble positions to those in the highest executive capacities—every man is not just an employee of the Company—he is more—he is an active member of this great "Organization for Sanitary Service". Every man must do his share to make this Organization effective and efficient.

The most ample and affirmative proof of the efficiency and effectiveness of this Organization, which today consists of an army of people, is that in 1875, the year of its origin, it numbered 100 persons—now 6,359. Then the capacity was 2 Bath Tubs daily—now it is more than 2,000 Bath Tubs, 2,000 Lavatories and 2,000 Sinks in addition to a large output of miscellaneous fixtures, plumbers brass goods and woodwork.

But, this Organization aims to do far more than manufacture and sell sanitary fixtures and appliances.

It aims to offer to you, the prospective buyer of such articles, a service that will enable you to carefully consider and choose the sanitary plumbing devices best adapted and most necessary for the sanitation of your school.

In what manner is this Organization available for your sanitary service?

Showrooms are maintained at the following places—

NEW YORK CITY 35-37 W. 31st St.	PHILADELPHIA 1215 Walnut St.	CHICAGO 900 S. Michigan Ave.	ST. LOUIS 100 N. 4th St.
BOSTON 120 Franklin St.	WASHINGTON, D. C. 15th & H Sts., NW.	PITTSBURGH 106 Federal St.	
CLEVELAND 648 Huron Rd., SE.	TOLEDO 311 Erie St.	LOUISVILLE 319 W. Main St.	NASHVILLE 315-17 Tenth Ave, S.
NEW ORLEANS Baronne & St. Joseph Sts.	HOUSTON Preston & Smith Sts.	FORT WORTH Front & Jones Sts.	
CINCINNATI 633 Walnut St.	TORONTO, CAN. 59 Richmond St., E.	HAMILTON, CAN. 20 Jackson St., W.	

Each Showroom is a sanitary information center. The men at each place know sanitation. It is one of the requirements of the Organization. Your problems can easily be solved if you are close enough to visit our Showrooms. If not, at each of these points, as well as many others, we have men who could probably arrange to go to see you and bring this sanitary service to your desk. And, no matter whether you go to get this information, or it is brought to you, you are not obligated in any manner.

If it is not possible for you to go for information or for some member of this Organization to take it to you in person, there is still another means at your command—obtaining this information by mail. All that is necessary is for you to tell the Organization that you have a sanitary problem. Communication will immediately be established. Our Sanitary Engineer will gladly aid in the solution of your Problems.

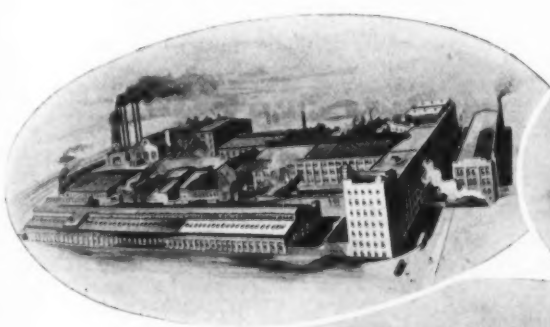
If you are building a new school or contemplate improving the sanitary facilities in your present school, during the next vacation season, do not delay getting the plans and specifications well under way. Do not let it go until the last moment. It is altogether too important for that, and then there is always such a rush to obtain fixtures during the vacation season, that late comers are sometimes disappointed.

Standard Sanitary Mfg. Co.

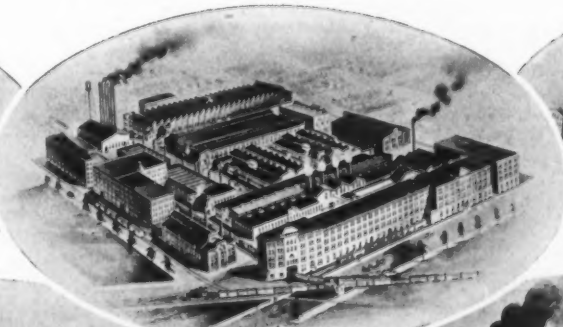
SCHOOL SANITATION DEPARTMENT

General Offices:

Pittsburgh, Pa.



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NEW BRIGHTON WORKS

THE FACTORIES BACK OF THE "Standard" ORGANIZATION FOR SANITARY SERVICE

SELF SETTING PLANE

Sent On
Trial



School Board, says:
"BEST THEY EVER HAD."

Elvira, Ohio, November 25, 1912.
GAGE TOOL CO., Vineland, N. J.

Gentlemen: Replying to your letter of the 21st inst., I beg to ask that instead of returning to us the little balance you say is to our credit please send us as per your suggestion one iron, complete (including the clamp and binder).

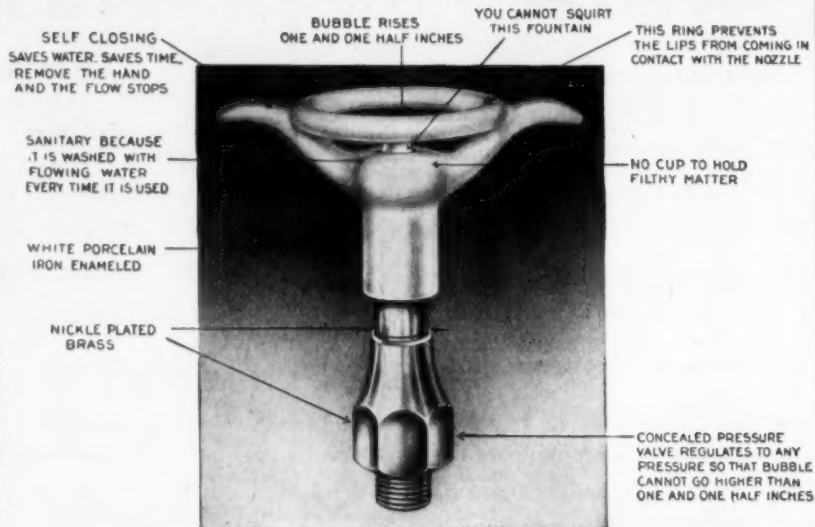
The planes we ordered came to hand in due season and were found to be all right. OUR MANUAL TRAINING TEACHER SAYS THEY ARE THE BEST WE EVER HAD.

Yours truly,
Elvira City Board of Education,
S. S. Rockwood, Director.

See page 38 last month's Journal

GAGE TOOL CO., Vineland, N. J.

The Last Word in Drinking Fountains



COVERED BY U. S. AND FOREIGN PATENTS
U. S. PAT. DEC. 17, 1912 — U. S. PAT. FEB. 11, 1911
U. S. PAT. JULY 8, 1911

PRICE \$5.00

SPRINGFIELD SANITARY DRINKING FOUNTAINS
30 CHURCH ST. NEW YORK



Olsen School Wagons

Built in Three Sizes

**Sanitary, Durable
and Neat**

Write for Prices and
Freight Rates

C. J. Olsen & Sons
Pittsboro, Ind.



Every School System needs them, what?
Portable School Houses

The "American" Portable is best
WELL VENTILATED, WARM,
SANITARY AND DRY

American Portable House Co.

329 Arcade Bldg., Seattle, Wash.

FIREPROOF SCHOOLS

John T. Simpson

Architect and Engineer

1224 Essex Building

NEWARK, N. J.

ing larger each year. In the country, fewer schools are being constructed because of the consolidation of schools by which a single four, six or eight-room building replaces from five to twelve one-room schools.

On colleges, we have no figures. In 1910 there were in the United States 581 institutions of college or university grade, 68 agricultural and mechanical colleges, 584 professional schools, 193 public normal schools, 64 private normal schools, 1,841 private high schools, 600 private commercial schools, 20 private schools for the deaf, 18 private schools for feeble-minded. Some of these institutions have as many as 25 buildings while others are in buildings which they only partly occupy. It would be impossible to hazard a guess as to the actual number of buildings.

5. The school enrollment of the United States in 1910 (latest figures) was as follows:

School and College Enrollment in 1910.			
Grades	Number of Pupils		
	Public	Private	Total
Elementary (kindergarten, primary and grammar).....	16,898,791	1,441,037	18,339,826
Secondary (high schools and academies).....	915,061	117,400	1,032,461
Secondary (preparatory departments of higher institutions).....	23,376	75,629	99,005
Universities and colleges.....	67,626	117,086	184,712
Professional Schools.....	12,541	54,814	67,355
Normal Schools.....	79,546	9,015	88,561
Total for the above.....	17,996,941	1,814,981	19,811,922
City evening schools.....	374,364		374,364
Business Schools.....		134,778	134,778
Reform Schools.....	42,381		42,381
Schools for the deaf.....	11,907	639	12,546
Schools for the blind.....	4,323		4,323
Schools for the feeble-minded.....	6,989	488	7,477
Government Indian Schools	37,883		37,883
Schools in Alaska supported by the Government.....	3,964		3,964
Schools in Alaska supported by incorporated municipalities.....	14,700		14,700
Orphan asylums and other benevolent institutions.....		17,000	17,000
Private kindergartens.....		110,000	110,000
Miscellaneous (art, music, etc.).....		55,000	55,000
Total for special schools.....	486,511	317,905	804,416
Total for all schools in the United States.....	18,483,511	2,132,886	20,616,398

* Estimated.

The daily average attendance in the public schools was, in 1909, 12,684,837, or 72.5 of the enrollment. No figures are available on the number of students "quartered" in the colleges.

6. Fire drills are good in practically all large cities. They are especially well organized in New York, Boston, Chicago. In our experience, the regulations are not so important as the manner in which they are carried out. The principles in all the sets of rules we have examined are identical; it is a question largely of adapting them to each building and of drilling well both teachers and children.

7. The problem of better schoolhouses, especially as it relates to improvements for safety against fire and panics, for better heating, ventilation, etc., is a very real one and will not be solved so long as it is left to local initiative. It should in our opinion be made the subject of state legislation and should be controlled by the state school authorities in co-operation with the state building departments.

Schools are nowhere municipal; they are state institutions. School boards are state officials and the school building laws of the states should control them in addition to the ordinary city building ordinances. The large cities have almost universally adequate building codes for school construction; it is the second, third and fourth-class cities that put up the ginger-bread schoolhouses and the firetraps. Here state regulation is needed and if conditions are to be universally bettered, they must be attacked by statewide legislation. A start in this direction has been made in New Jersey, Pennsylvania, New York, Ohio, Utah and several states where all schoolhouse plans, private as well as public, must be submitted to the respective state education departments and its architect for approval in such matters as safety and sanitation. In Indiana and Wisconsin a further step has been taken in that old buildings are subject to state inspection and where insanitary or unsafe buildings may be condemned. The very simple device of requiring the withholding of state funds from such school boards as fail to comply with the orders of the state departments, both in new construction and in repairing old buildings, has made the laws in the states just mentioned most effective.

SPECIAL STUDIES.

Massillon, O. A first grade teacher in the public schools has demonstrated during the past few months that children can be cured of color-blindness and other defects by the use of the Montessori method of teaching. The Montessori methods and equipment were used. It has been found that one child was cured of color-

blindness after using the thirty-eight different shades in the color-box. Another child was unable to dress herself but by using the framework of buttons she was later capable of putting on and fastening her own garments. Parents have become much interested in the work.

Supt. Ella F. Young of Chicago, Ill., has explained the object of the new course in printing in the public schools by the statement that it is to make the pupils better spellers, surer of their punctuation, and to help in the acquirement of a good idea of literary form.

Mrs. Young is quoted as follows:

"Setting type is the best teacher of spelling that I know of. A pupil will write a word wrong and never seem to think anything of his error, but once you let him go to the trouble of setting it up in type wrong and then have to reset it to get it right, the spelling of the word is forcibly impressed on his mind. Again, a student who will think it no disgrace to spell wrong in hand writing, when he sees the word printed wrong on paper is much more struck by the erroneous spelling and wants immediately to correct it.

"I anticipate that there will be no overcrowding of the printers' ranks, even though the classes should prove immensely popular."

The schools in which the printing presses and equipment will shortly be installed are the Lane, Crane and Lake technical high schools, and the Flower high school.

Lincoln, Ill. Domestic science and manual training have been added to the work of the public schools.

Minneapolis, Minn. Laundry work has been added to the course in the Blaine grade school. The work is a part of the home economics course and will be added to the high-school work next year. The pupils are taught how to wash knit goods and articles of a coarse nature. The laundering of fine laces and delicate fabrics will also be given attention.

Kansas City, Mo. An "open class" for young men and women who have already begun their life work has been instituted at the Central high school. The school is situated in the business district and is accessible to all young people employed in the city limits. The classes are open to those under twenty years of age and will enable anyone to take any special line of work which the course of study includes. The students may devote an hour in the morning or at noon and thus secure a great deal of what they have missed by leaving school.

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WOLFF

QUALITY

Plumbing Goods

exclusively are used in this school. The closets are strongly built, and in construction so distinctive that they defy the every prank of the wiley school-boy.



CARBON CO. HIGH SCHOOL

Frank W. Moore, Archt., Salt Lake City, Utah

SEND FOR ILLUSTRATIONS
OF SCHOOL CLOSETS

ESTABLISHED 1855

L. Wolff Manufacturing Co.

MANUFACTURERS OF

PLUMBING GOODS EXCLUSIVELY

The one line that's complete—completely made by one

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Trenton, New Jersey
Omaha, Nebraska
Minneapolis, Minn.
Dallas, Texas
Rochester, New York



SCHOOL REPORTS.

The total attendance in all grades of the public schools of New York state, during the past year, was 1,956,365. Of this number, 1,329,925 were enrolled in elementary schools, 180,010 in secondary schools and 41,381 in higher institutions and professional schools. The number of teachers in the elementary schools was 39,256, in the secondary schools there were 7,097, in the normal and training schools 516 and in the higher institutions 5,031.

The total value of school property was \$391,036,587. The greater part of this was invested in the common elementary schools and in the colleges and universities. The value of the former was \$175,167,988 and of the latter \$142,073,779.

The total expenditure was \$5,000,000 more than for the preceding year. For elementary schools there was expended \$50,189,433; for public high schools, \$9,569,177; for academies, \$4,000,603; for higher institutions, \$17,927,942 and for vocational schools, \$324,438. The cost of maintaining the public schools was \$59,063,976, an increase of \$5,825,837.

The most marked advance in the educational work of the state during the year was evidenced in vocational training. There were more than three times as many vocational schools as in the preceding year as shown by a 95 per cent increase in property and in registration and an attendance increase of 115 per cent. In agricultural work there has also been a marked increase and several vacation schools are now being conducted in the cities.

Recent statistics compiled by State High School Inspector H. L. Terry indicate that the enrollment in the free high schools of Wisconsin has increased 8.4 per cent in one year and the cost of instruction has increased 17.7 per cent. The number of pupils taking German has increased ten per cent, while the number taking Latin decreased 12.1 per cent.

The following table will show the more important facts:

- Number of male high-school teachers, 651.
- Number of female high-school teachers, 1,008.
- Enrollment of male students, 13,396.
- Enrollment of female students, 16,000.
- Number of high schools offering agriculture,

Number of high schools offering domestic science, 88.

Number of high schools offering manual training, 78.

Cost of instruction, 1911-12, \$1,128,000.

Non-resident tuition, \$140,954.

Los Angeles, Cal. Statistics compiled recently show that there are 29,714 boys enrolled in grammar schools as compared with 26,810 girls. In the high schools, 5,581 boys are listed and 5,551 girls. The figures disprove the claim that girls are in advance of boys in scholarship and that they constitute the larger number in the schools.

In former years the number of girls was far greater than the number of boys and consequently it became an adage that girls were scholarly and were more anxious for an education.

A report of the Connecticut state board of education for the past year shows that the enrollment in the schools was the largest in its history. The total number enrolled was 197,852 pupils.

The expenditures for the public schools have doubled during the past ten years so that the expense for the year 1912 reached \$6,122,367. The enumeration grant amounted to \$575,522 or a little less than \$3 per child. The average cost per child as registered was \$27.53 and computed on the basis of average attendance was \$34.98. The average cost for a day of schooling for each child was estimated at twenty-four cents.

The percentage of attendance for the year was 87.65 as compared with 85.70 for the previous year. There were 5,488 teachers employed of whom 53.57 per cent have a normal training and 11.46 per cent have a college education. The average wages of women teachers was \$57.87 per month.

The high schools of the state enrolled 15,322 pupils and 2,011 were graduated. Of these, the colleges and universities enrolled 465 and the normal schools secured 322. The number of teachers employed was 666, of whom 464 were women. The salaries amounted to \$593,897.

The expenditures for high schools amounted to \$775,080 or an average cost per pupil of \$50.58. Fifty-five high schools were allowed to collect tuition fees and transportation amounting to \$59,387 or an average of \$35.68 per pupil.

The enrollment in the normal schools of the state was 782 a slight decrease from the figures of the previous year. New Haven leads the list with 229 students while Willimantic comes last with 122 pupils.

According to the provisions of the state law, the eyesight of public school children receives attention. The number whose eyesight was tested was 154,379, of which 14,824 cases of defective sight were discovered. It has been found that a decided improvement has been effected as the percentage of defectives was only 9.6 as against 13.0 in former years.

Efficient supervision of rural schools is rapidly becoming a large factor in the small communities and the number of small towns with supervised schools has increased from eight to ninety-two. Thirty-four trained men are now employed in the work of supervision where twenty or less teachers are employed. They supervise 597 schools with a total of 922 teachers and an enrollment of 22,015 pupils.

The state of California spent \$25,678,620 on the public schools during the past year. The expenditure is \$3,607,692 more than that of the preceding year. There were 13,248 teachers in the schools. The item of salaries was the heaviest cost in the list. Kindergarten teachers received a total of \$1,188,849 or \$23,241 more than that received in 1911.

Grammar school teachers were paid \$9,472,440 or about \$800,000 more than that paid the preceding year.

High school teachers cost the state \$3,026,023, almost half a million more than in 1911.

There are 4,000 grammar school buildings in the state with an attendance of 356,945 children. The cost per child was \$34.41.

The high schools number about 220 with 2,312 high school teachers. A total of 47,000 children were in attendance, of which 5,357 were graduated. The cost per child was \$90.21 or an increase of \$9.33 over the preceding year.

Grammar school property is worth \$37,454,075 and high school property \$13,420,369.

Chicago, Ill. The school board has authorized the equipment of high-school lavatories with vending machines for the sale of sanitary paper towels.

It's Fun to Tinker

Boys, if you want to tickle yourselves with genuine sport, get together a few Keen Kutter Tools and "tinker." You'll be surprised at the number of handy and amusing things you can knock together after school hours.



KEEN KUTTER TOOLS

cost no more than ordinary tools, but are vastly better. They are fitted to a boy's need because their superior shape, temper and balance make up largely for his lack of skill. Keen Kutter tools are guaranteed. If you see the trade mark when buying, you needn't ask questions, you can't go wrong.

Write for booklet No. 978—tells how to make beautiful furniture for the home.

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SIMMONS HARDWARE CO., Inc., St. Louis and New York, U. S. A.

Chisel No. KSB 3 in. Price \$0.70	Hammer No. KP113 8 oz. Price \$0.75	No. K 122 6 in. Price \$0.35
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We have just published a set of slides on **TIBET the Unknown**. This consists of 42 slides with reading, and is for sale or rent.

Absolutely unique and not reproducible.

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both in Elementary and High Schools should be indirect, soft and mellow. Therefore "Melo-Glo" fixtures are best. Remember most schools are judged and visited by taxpayers at night only.

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Circulars showing the different styles, also discounts upon request

The Hetterschied Mfg. Works

Original and Sole Manufacturers
Grand Rapids, Mich., U. S. A.

TEACHERS AND SCHOOL ADMINISTRATION.

The school board at Sacramento, Cal., has passed a rule to the effect that teachers will be allowed ten days' absence with pay during the school year when such absence is caused by illness or death in the family. The teacher may secure five days for each term but all other time off will be deducted from the regular salary.

The school board of Indianapolis, Ind., has become involved in an argument as to whether the participation of teachers in woman suffrage work in the schools is in violation of the rules of that body. The board has ruled that until the question is finally decided that all work in school building must cease. Supt. J. G. Collicott had reported that a committee of the Woman's Franchise League had appointed a captain for each building to work among the teachers.

The Milwaukee board of school directors has amended its rules regarding teachers which provides that those who have been granted leave of absence on or before the fifteenth day of May, of the year in which the leave of absence will expire, shall notify the superintendent in writing, of their intention to resume work at the beginning of the ensuing school year.

Teachers who are absent on leave for one month or longer, and not to the end of the school year, must give notice to the superintendent, of their intention to return for service, at least ten days before the expiration of the leave of absence.

Minneapolis, Minn. The school board has decided that women who have husbands capable of supporting them are not in need of the help of the city to give them employment. For this reason four teachers in the schools who will shortly marry will be obliged to resign.

San Francisco, Cal. The school board has adopted an amendment to the rules relating to deduction from vacation salaries because of absence. The amendment reads:

"No deduction shall be made from the summer vacation salary of any teacher at the close of the school year, whether in actual attendance or on leave of absence. Said teacher must have been in reasonable regular attendance throughout the spring or fall term, and in case of leave of absence for study, travel, rest or recuperation from illness must have been excused by a resolution of the board."

The board also adopted the following resolution:

"Teachers who are absent for less than the entire month of any calendar month shall receive a deduction from their monthly salary

equal only to the actual teaching days absent. The absence must be excused by a resolution of the board.

The school board of Oklahoma City, Okla., has passed a rule which bars the appointment of married women as teachers in the schools. The board also voted to dismiss, without notice, any teacher who shall be absent from duty one-half of a year or more. The former rule has been the policy of the board for some time, but had not been incorporated in the records of the board.

TEACHERS' SALARIES NOTES.

Taunton, Mass. The school teachers have made a demand for an increase of \$100 in their salaries. The demand is based on the fact that the average school teacher in elementary grades has less than three dollars left after paying her board and room bill, carfare, laundry and expenses connected with her school and church life. One woman showed a record of \$600 salary for one year and expenses of \$593 for the same length of time.

Gary, Ind. The school board has raised the pay of all principals, department heads and two school physicians from \$1,800 to \$2,100 per year. The salary of Supt. W. A. Wirt has been raised to \$6,000.

Somerville, Mass. The school board is considering the question of increased salaries for the teachers. It is expected that the school committee will ask the mayor for \$330,000 for this purpose. The amount includes the sum of \$8,000 providing increases of \$50 for all teachers and \$1,500 for the expense of maintaining a physical instructor.

Redfield, S. D. The school board has voted a new schedule of teachers' salaries which fixes the minimum pay at \$60 for grade teachers and \$75 for high-school teachers.

Lowell, Mass. The school board has adopted the salary schedule recommended by the finance committee. The schedule reduces new teachers from \$650 to \$500, but this applies only to teachers to be employed in the future. The schedule is as follows: First year, minimum, \$500; second and third years, \$550; fourth and fifth years, \$600; sixth and seventh years, \$650; eighth and ninth years, \$700; tenth year, \$750; eleventh and thereafter, \$800.

CARE OF ATYPICAL CHILDREN.

Buffalo, N. Y. Two additional schools will be added to the list of ungraded classes. One of these is a fresh-air school. It is the purpose of the hygiene department to increase these classes as rapidly as possible so that the backward

pupils may be able to catch up with their classes. Four classes have been in operation for some time, one being a fresh-air school.

The department of education at Buffalo, N. Y., has been organizing classes for unusually backward children, the work being in the hands of George E. Smith, supervisor of extension. Three such classes have already been started, with about seventy-five children in attendance. The chief aim is to find the cause of the backwardness and, if possible, to remedy or eradicate it. "Sometimes," said Mr. Smith, "the cause of a boy's seeming stupidity will prove to be poor eyesight. Of course, not knowing anything different, the boy will be as ignorant as anyone else of the reason for his stupidity. He may have a keen brain that will be awakened in no time by proper glasses. Or, again, the root of the trouble may be deafness. Even the genuinely feeble-minded children can often be made fully self-supporting by proper methods."

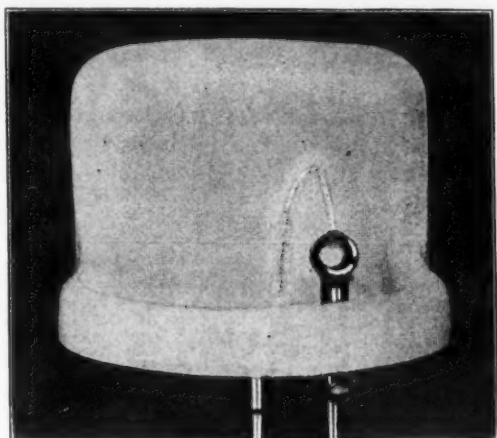
According to the compilation of the preliminary census of exceptional children in the elementary school of New Orleans, which was made up from the reports of the teachers and compiled by Superintendent Gwinn and Dr. David Spence Hill of Tulane University, the number of exceptionally able or gifted children was found to be just 1 per cent among the white pupils and 1.5 among the negroes, or 1.2 for all. In the entire schools the number of those classed as feeble minded and unfit for public schools was found to be 28 hundredths of 1 per cent (.28). Of the backward children requiring social classes the per cent was 7.7. Of defective vision there are 3.1 per cent and deaf and partially deaf 1 per cent. Those of defective speech were 2.2 per cent, those crippled .5 per cent and epileptics numbered .09 per cent. The percentages were calculated on a total enrollment of 37,824. The results were tabulated in detail for each school and were printed in tabular form. The totals by numbers were: Feeble minded, 107; backward, 2,925; exceptionally able or gifted, 407; defective vision, 1,168; deaf and semi-deaf, 401; defective in speech, 842; crippled, 177; epileptics, 33.

Classed as incorrigibles or habitually vicious children were 412. Of this class 157 or four-tenths of one per cent were classed as apparently of defective mentality and 255 or seven-tenths of one per cent as apparently of normal mentality.

The report also states that some forty-six per cent of the children are now of over age for their grades.

Mahoney Sanitary Drinking Fountains

SELF-REGULATING



The only Fountain now made that has a *dependable and successful regulator*, easily accessible filter and steady, non-squirting slant stream.

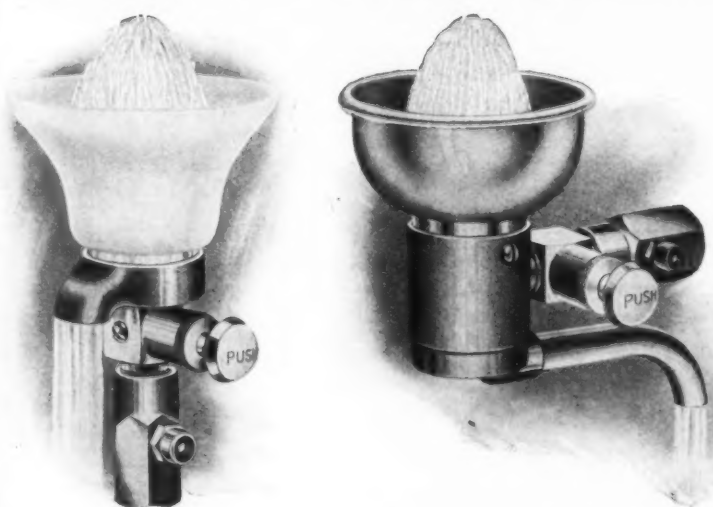
More Mahoneys sold than of all other makes combined. Try one at our expense.

MAHONEY FOUNTAIN COMPANY

Portland, Maine

Write for Catalog and Prices

SUPPOSE A PECULIAR CONDITION



in your school made necessary Bubbling Heads with Spouts.

Suppose you want to use a private drinking cup as against the ordinary bubbler.

Rundle-Spence Bubbling Fountains with spout attached would just answer your requirements.

Therefore write today for catalog.

Rundle-Spence Mfg. Co., Milwaukee, Wis.

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MARK



The Clow

(Adamantose Ware)

Drinking Fountain

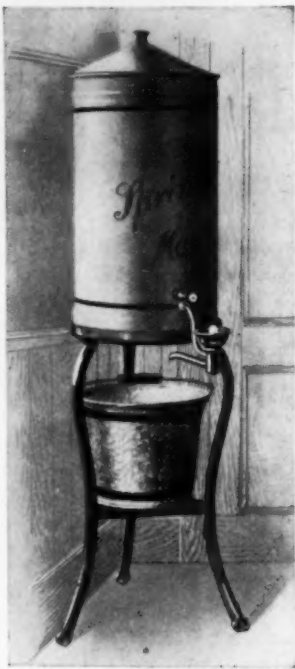
All bubble cups are "law-proof,"
but very few are germ-proof.
The Clow "Madden Patent"
Drinking Cups are both

Send for Bubble Cup
Fountain Catalogue



**James B. Clow
& Sons**

CHICAGO



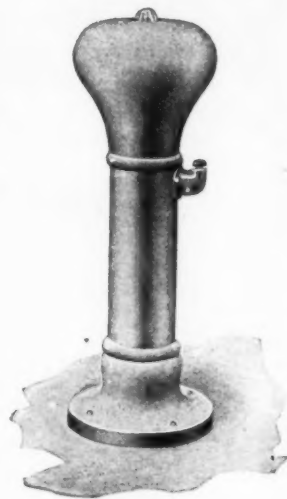
Spring Maid Fountains

PROVIDE RUNNING WATER

for schools without a satisfactory water supply under pressure. It offers every advantage of a pure city water supply at a price within the reach of every district school.

Wolverine Pedestal Fountain

affords a most inexpensive and attractive fountain for cities where they have water systems. The bowl is closed at the top and so constructed that children cannot throw refuse in at the top as is common with other pedestal fountains.



Wolverine
Pedestal Fountain

WRITE FOR OUR CATALOG

The Gier & Dail Mfg. Co., 507 Grand Street
LANSING, MICH.

OUT OF THE DAY'S WORK

A Rural School Score Card.

To facilitate the examination of rural schools, Mr. J. L. Bond, supervisor of the rural schools of Arkansas, has recently devised a "score card" which is sent to county superintendents and which they are expected to use in visiting and inspecting the schools under their supervision.

The exact aim of the card is stated by Mr. Bond as follows:

"This Rural School Score Card has been prepared for use by county superintendents when visiting the rural schools of their counties. The aim is to fix a definite, workable standard of ideal conditions for these schools in all points which make for their greater efficiency. It will be remembered that more than 80 per cent of our boys and girls are being educated in our country schools and if by the use of these cards school conditions can be improved we shall feel that their use has been worth while.

"By careful and judicious use of these Score Cards, we feel confident that you will be able to encourage and stimulate well-directed efforts for better conditions in our rural schools to the end that these schools may be made fully efficient. We earnestly urge that you take these Score Cards and use them for the purpose in view in their preparation—the betterment of these schools in every way."

The card contains on the face, space for entering the name of the county, the number and name of the school district, the name of the school, the date of visit, the total number of points scored and the name of the superintendent. Some space is also allowed for remarks.

On the back of the card is the following list of points by which the rating is made:

	Points Allowed
I. Grounds (16 Points)	
1. Grounds of at least one acre and fenced.....	4
2. Grounds well drained and nicely kept.....	2
3. Two good outhouses, well kept and clean.....	2
4. Grounds clear of trash and rubbish.....	2
5. Shrubby or trees set out.....	2
6. Water supply from safe source.....	4
II. Buildings (22 Points)	
1. Building painted and in good repair.....	4
2. Ceilings and painted or plastered.....	2
3. Floors well swept and walls clean.....	2
4. Windows clean with panes all in.....	2
5. Window space at least one-fifth of floor space.....	2
6. Light from rear and sides with no glaring or cross lights.....	2
7. Ceiling of lighter color than walls.....	2
8. Window with good shades.....	2
9. Doors with locks and keys.....	2
10. National Flag.....	2
III. Equipment (22 Points)	
1. Seats well arranged and of proper sizes.....	4
2. Suitable chair and desk for teacher.....	2
3. Good blackboards.....	2

4. Jacketed stove, or ventilating stove with proper ducts.....
5. Appropriate wall pictures (at least two).....
6. Suitable maps, charts, globes, etc.....
7. Children supplied with proper books.....
8. Library with suitable selection of books.....
9. Dictionary with stand or rack.....
10. Sanitary drinking faucets, fountain or individual drinking cups.....

IV. Teacher (28 Points)

1. With first grade certificate, high school, college or normal work.....
2. Second term or longer in present school.....
3. Using modern methods.....
4. Daily attendance 90 per cent of enrollment and enrollment 80 per cent of enumeration.....
5. Pupils obedient and at work.....
6. Program on board or wall and closely followed.....
7. Course of study being followed.....
8. Knows well the subjects.....
9. Lessons assigned with care.....
10. Register neat and well kept.....
11. Doing required reading in Teacher's Reading circle.....

V. Community Activities (12 Points)

1. School gardening or special work in Agriculture being done.....
2. An active School Improvement Association.....
3. Boy's Corn Club work carried on.....
4. Girl's Canning Club work carried on.....
5. Literary Society or Debating Club.....

Schools scoring 90 to 100 points will be rated as Class A schools; those scoring 75 to 90 points as Class B schools, and those scoring 60 to 75 points as Class C schools.

The Library Habit.

Supt. E. E. Kuntz, of Lansford, Pa., has recently established a system of individual school-room libraries. Each class in each of the schools of the Borough is furnished with fifteen books of supplementary reading on the various studies, including history, nature study and geography. Several books on fiction and fables are also included. The pupils are permitted to read the books at certain times during the school day and under certain restrictions are allowed to take them home for evening reading. The books chosen are suited to the respective grades. Thus, for instance, in the third grade, the books are selected with especial reference to children between the ages of eight and nine years of age and with reference to the studies pursued in the grade. The plan which has worked very well has for its purpose the encouragement of outside reading and the direction of the pupils' taste for good literature.

The art department of the Muskegon, Mich., high school takes charge yearly of an issue of the high school magazine for the publication of an art pumber. The last issue of the periodical, which appeared in February, contains specimens of school work and in addition several articles on local art by the director of the local art gallery and by the head of the art department. The students were represented not only by actual examples of their work, but also by several brief essays on art topics. The magazine was beautifully printed on gray mat paper and many of the wood-block illustrations were in two colors.

HIGH-SCHOOL ADMINISTRATION.

Mr. J. W. Shideler, principal of the high school at Junction City, Kans., has begun a systematic effort to raise the standard of scholarship among the students. To further the work circular letters were sent to the parents and enclosed with the cards of the respective students.

Parents are requested to investigate whenever the student falls below eighty per cent. The aim is to stimulate all the students so that those only getting an average of eighty per cent will endeavor to raise this to ninety. Those who secure merely a passing mark of seventy-five per cent are urged to seek that of the next higher.

Attention is also called to the amount of home work which should be required. The minimum requirement for each study in the schoolroom is one hour. In addition it is necessary that three hours of home study be accomplished in order that the remaining lessons may be prepared for the following day.

Fitchburg, Mass. The school committee has provided a part-time course for pupils of the commercial department of the high school. The plan has been given a trial and the board is convinced that it is feasible. The course provides employment in a business office and study in school, divided equally, so that the pupil gets the benefit of practical experience while he is preparing for a permanent position.

Supt. C. R. Frazier of Everett, Wash., has since September successfully conducted separate classes for boys and girls in the first and second-year classes of the high school. The plan has been received favorably by the teachers who declare that they find themselves presenting the subject matter in a different way to a class of boys than to a class of girls. The pupils prefer it to the old plan.

Supt. Frazier has recently adopted the same plan in regard to the eighth grade pupils of the Central school and classes have been organized accordingly, with the exception of two mixed classes.

Supt. S. F. Herron of Winchester, Mass., has declared that the per cent of failures in the high school has been steadily decreasing. At the present time it is practically the same as that in the grades, being only 4.7. Mr. Herron then shows what measures have been taken for raising the quality of work. They are as follows:

More teachers and equipment,
Individual attention to pupils,
Special teacher for delinquents,
Passing marks raised from sixty per cent to seventy per cent,
Standing required for college entrance certificate raised from seventy to eighty per cent,
Credits for graduation raised from sixty-four to sixty-eight.

Stegeman

Modernize Your Department



ONE Stegeman truck in your service will show unexpected economies in your distribution of supplies. Searching investigation convinced engineers of the American Express Company that the simple Stegeman design means reduced operating expense and low upkeep cost.

A careful comparison will convince you also.

Request brings full information and a copy of the most comprehensive truck catalogue ever issued.

STEGEMAN MOTOR CAR CO., School Supply Dept. Milwaukee, Wis.

This Drinking Fountain WILL NOT FREEZE!



SO IT IS
**THE KIND FOR
YOUR SCHOOL
YARD**

Children should get their drinks in the OPEN AIR — NOT in washrooms and basements.

The **MURDOCK
"BUBBLE-FONT"**

is the only anti-freezing drinking fountain on the market.

WRITE TODAY FOR BOOKLET

The Murdock Mfg. & Supply Co.
Cincinnati, Ohio

AMONG BOOKMEN

PARKER SIMMONS DEAD.

Parker P. Simmons, who conducted an educational publishing business at 3 East Fourteenth Street, New York City, for many years, died March 24th following a brief attack of pneumonia.

Mr. Simmons was a native of Kingston, Mass., and was graduated from Bowdoin College with the class of '75. He began his career as a teacher in Mendon, Mass., and later was sub-master of the high school at Lawrence, Mass. He did not remain here long but entered the book business and later became interested in a flour mill. His business led him to remove to New York City and to enter the Produce Exchange. In 1886 he became a member of the Brooklyn board of education in which he was active until 1898. At that time he was elected Superintendent of the Department of Supplies for the newly organized Board of Greater New York. He held this position until 1903 when he purchased the business of A. Lovell & Company.

Mr. Simmons was a familiar figure in New York school circles and handled a large amount of school specialties in addition to the books which he published. While his trade was largely confined to the city, Mr. Simmons enjoyed a wide acquaintance with schoolmen in all parts of the country.

BOOKMEN NEWS.

Mr. William Ritchie, Jr., formerly connected with the University Publishing Company of Lincoln, Neb., and Mr. A. L. McLaughlin, formerly with D. C. Heath & Co., have recently organized a casualty insurance company. The company will write accident and life insurance for teachers and will be known as the Teachers' Casualty Underwriters. Its headquarters will be at Lincoln, Neb., but its field of operation will include the entire United States.

James W. McIntyre, a partner in the old house of Little, Brown & Co., Boston, died January

9th at the age of 64. He was for fifty years connected with the firm, having entered its employ as a messenger when but 16 years old. Mr. McIntyre was well-known not only as a keen critic of manuscripts but also as a judge and lover of old editions and finely-bound books. It was he who first recognized the worth of Sienkiewicz and introduced his works to American readers.

Mr. F. E. Morrow, agent of the Rand-McNally publications in Nebraska, has recently had Colorado added to his territory.

Educational Trade Notes

Changes Name.

The Fred Frick Clock Company has recently changed its corporate title to Landis Engineering & Manufacturing Company. The firm will continue to make the well known "Frick" Electric Time and Program Clocks, and will in addition, take up the manufacture of several other devices.

The change of name does not involve any change in the ownership or management of the business, but simply a development of its present facilities and the extension of its engineering activities. The plant is being enlarged and some vital changes are being made in the agency and repair methods which will insure better service to present prospective users of Frick program clocks.

F. W. DEVOE DEAD.

Frederick W. Devoe, formerly head of the firm of F. W. Devoe and C. T. Reynolds Co., died in New York City on March 21st at the age of eighty-five.

Mr. Devoe was a native of New York City and came of old French stock. He entered the paint industry at an early age and in 1852 entered into a partnership with C. T. Reynolds under the firm name of Reynolds & Devoe. The concern was a continuation of the first paint manufacturing business in the United States, having

been established in 1754. In 1864, Mr. Devoe withdrew and organized the F. W. Devoe Company which he managed until 1892. At that time the business was merged with that of the C. T. Reynolds Company, forming the largest paint manufacturing house in the country.

Mr. Devoe was active in school affairs in New York City for many years. As a member of the board of education of the old city of New York, he was especially active in shaping and simplifying elementary courses of study and in systematizing building operations. He was the author of a resolution which resulted in the erection of the present office building of the board.

N. E. A. Committees.

Two important committees for the study of educational problems were appointed at the recent convention of the Department of Superintendence in Philadelphia. The first of these is known as the committee on reorganization of American educational forces, which is to study the present organization of the teaching profession in the United States. The committee includes C. R. Judd of Chicago, Commissioner David Snedden of Massachusetts, Prof. F. E. Bolton of Washington, Supt. C. S. Meeks of Boise City, Miss Katharine Blake of New York City and Mr. A. S. Downing of Albany, N. Y. The committee will base its studies primarily on the address of Dr. Suzzalo. The second committee is practically a continuation of a committee appointed some years ago on standards and tests of efficiency of schools and school systems. The new committee is headed by Dr. Geo. D. Strayer of Columbia University.

To Prevent Vibration.

A unique method of preventing vibration from being communicated in a school building has been introduced by Architects Charlton & Kuenzli in the new high school at Iron Mountain, Mich. It consists in constructing the floors in the woodworking and machine shops without any contact with the walls or pillars supporting the upper floors of the building. The floors are concrete and the space left between walls and flooring is filled with a non-vibrating material.



"U. S."

Pat. Dec. 18, '06
Pat. Jan. 19, '08



"SUPERIOR"

Pat. Nov. 14, '11

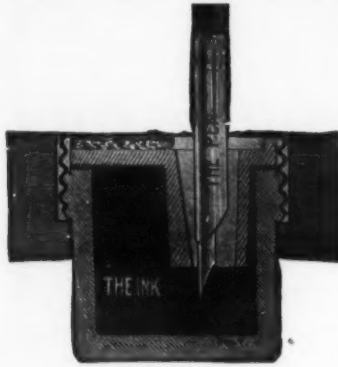
These wells will satisfy your desires, especially the "U. S." which fits holes of different sizes perfectly.

NON-EVAPORATING and DUSTPROOF are a few of the many advantages of our goods. Get samples and prices and be convinced. No obligation in accepting free samples.

WE ARE THE ORIGINATORS OF PRESSED STEEL INK WELLS AND ACORN SHAPE BOTTLES.

Order through your dealer or direct from us.

U. S. Inkwell Co. Inc.
Des Moines, Iowa



(Patented)

The Jacobus Pneumatic Ink-Well

It prevents evaporation—the ink never thickens. It requires filling but twice a year.

It prevents the pen from taking too much ink, to smear the fingers, or to drop on paper, desk or floor.

IT GATHERS NO DUST, IS NOISELESS, FLUSH WITH TOP OF DESK, NOT EASILY BROKEN, AND IS THE MOST SATISFACTORY AND ECONOMICAL WELL EVER MADE

In purchasing new school desks make the condition that they shall be supplied with

THE JACOBUS PNEUMATIC INK-WELL
Send for Circular and Prices

JACOBUS PNEUMATIC INK-WELL CO.
16 Exchange Place, N. Y. City

SQUIRES INKWELL COMPANY



No. 8

Squires No. 8 Inkwell



Squires No. 2 Inkwell

Undoubtedly our flush inkwells are the best on the market and more extensively used than any others. Our No. 8 fits the same size hole as does our No. 3, but holds about 50% more ink and is generally preferred on that account, is finished in bronze but will nickle when so ordered.

Our No. 2 sliding lid inkwell has a wide flange and will cover up or fit any hole from 1 1/4 to 2 1/4 inches in diameter. It was designed especially to refit old desks. This inkwell extends less than 1/2 of an inch above the surface of the desk, is nearly as good in this respect as a flush inkwell. The glass sets inside the iron holder.

See last month's journal for other styles. Write for illustrated circular and prices.

SQUIRES INKWELL CO., - - - **Pittsburgh, Pa.**



ALL STEEL PATENTED

LUGLESS GLASS

That "Tannewitz"
Flush Top All-Steel Inkwell

5 years on the market. 2,000,000 in use. Best for school desks because unbreakable, cannot be removed from the desk and will not push thru the hole. Features are patented and used by us exclusively. Avoid imitations. Look for the name "Tannewitz." Sample free.

The Tannewitz Works
GRAND RAPIDS, MICH.

THE GLEN COVE SCHOOL BUILDING.

(See plans, page 23).

The new Glen Cove School is one of a group of three school buildings, with which it forms a sort of quadrangle. With its older neighbors it forms the educational center of the village of Glen Cove, Long Island, N. Y. The necessities of the site cause it to be on somewhat higher land than the others. The original building is a very large structure with brick first story and shingles above, including its roof. The second structure has no marked characteristics, except its entire dissimilarity with its mate. No motive, therefore, existed in the group that could possibly be followed in the new design; and it was elaborated simply with the thought of erecting a structure of quiet dignity that should not in any way overtop the others, notwithstanding the fact that it stood upon higher land.

The building is entered from the front and from each end. The main entrance is at the center, while the end doors are devoted to girls and boys respectively. At all entrances immediate access is had with roomy stairs to the basement, as well as to the upper stories.

Upon entering, one is impressed with the ease of the stairs; yet they do not seem to take up too much room, or room that could be used for any other purpose. Their treads are twelve inches wide, while the risers are only six inches high. Under the ordinary handrails are lower rails for the little tots, although with these easy stairs it is hardly expected that they will be necessary.

Opposite the main entrance is the principal's room, and on the second floor, just above it is a "teachers' retiring room", with lavatory and cloakroom. Across the hall from this and immediately above the main entrance is a room for special study.

Besides the above rooms there are sixteen classrooms, each 25 by 30 feet, with liberal cloakrooms, and teacher's wardrobe and closet built in. The cloakrooms are entered from the classrooms, as it is thought that this arrangement brings them much more directly under the teacher's eye.

In laying out the building the unilateral

lighting system was followed, windows being put on one side only of the classrooms, the desks so facing as to bring the light over the left shoulders.

Everywhere, except at the windows and doors, blackboards exist; and in those few rooms where the seats face the cloakroom doors, blackboards exist on these doors. This gives an unbroken surface for display behind the teacher and in front of the desks. It is believed to be a new and very successful feature.

The basements are large, light and open. They contain the girls' and boys' playrooms, and toilet rooms; also the heating and ventilating outfit are in the basement. As will be explained later, the construction is such that these spaces are almost unobserved by columns.

The toilets are arranged to be as light and sanitary as possible; but, though steps are being taken to build a sewerage system in the town soon, none now exists. It was therefore thought best to put a dry closet system in the building for a few years. Ample ventilating flues are built, and the draft is very strong. For the same reason, there is no water closet in the second story, though place in the teachers' room is arranged for it.

The halls at the stairways are 13 feet wide, and at the main entrance in front of the Principal's room, 16 feet wide, the connecting links of hallways being eight feet wide.

The general construction details are somewhat unusual and interesting. The problem was, with a limited amount of money, to construct a fireproof building as possible of the size desired, and one which would give the minimum of future maintenance charges.

Regarding the maintenance of the exterior, no leaders exist there, all roof water being carried to the general drainage system by heavy cast iron leaders in chases within the building; nor is there any tinwork or sheet metalwork outside the building; excepting the copper flashing. The cornice and other such parts, often made of cheap sheet metal, are terra cotta. The walls are brick, laid in running bond with tooled joints, to emphasize the horizontal lines of the

building. There is therefore, no outside painting at all, excepting the windows and doors.

The entire interior is carried on modern steel frame construction, with columns about thirty-two (32) feet apart. This as above mentioned almost entirely frees the basement from objectionable features, almost all of the columns being placed out of the playrooms.

Partitions are brick in the basement, and of wooden studs in upper floors, but none are carrying partitions. That is, any or all could be cut away and removed on either floor, and the floor above and roof would remain entirely intact. Thus, if there was a desire to throw two rooms together, for a large kindergarten or manual training room, or even to open up an entire section of the building, there is absolutely no physical objection or difficulty to be overcome.

All floors are magnesium calcite composition fitted with sanitary cove bases. This includes the stairways, and wainscots to halls and stairs. There are iron railings on the stairs, and in fact no wood appears above the basement, except windows and doors. The general effect is very neat and trig. The building can be cleaned out with a hose, and, should a lighted lamp fall on the floor, absolutely no harm would be done.

The heating is steam with both direct and indirect radiation. A large tempering coil exists in the fresh air duct room in the basement, with an electrically driven fan, etc.

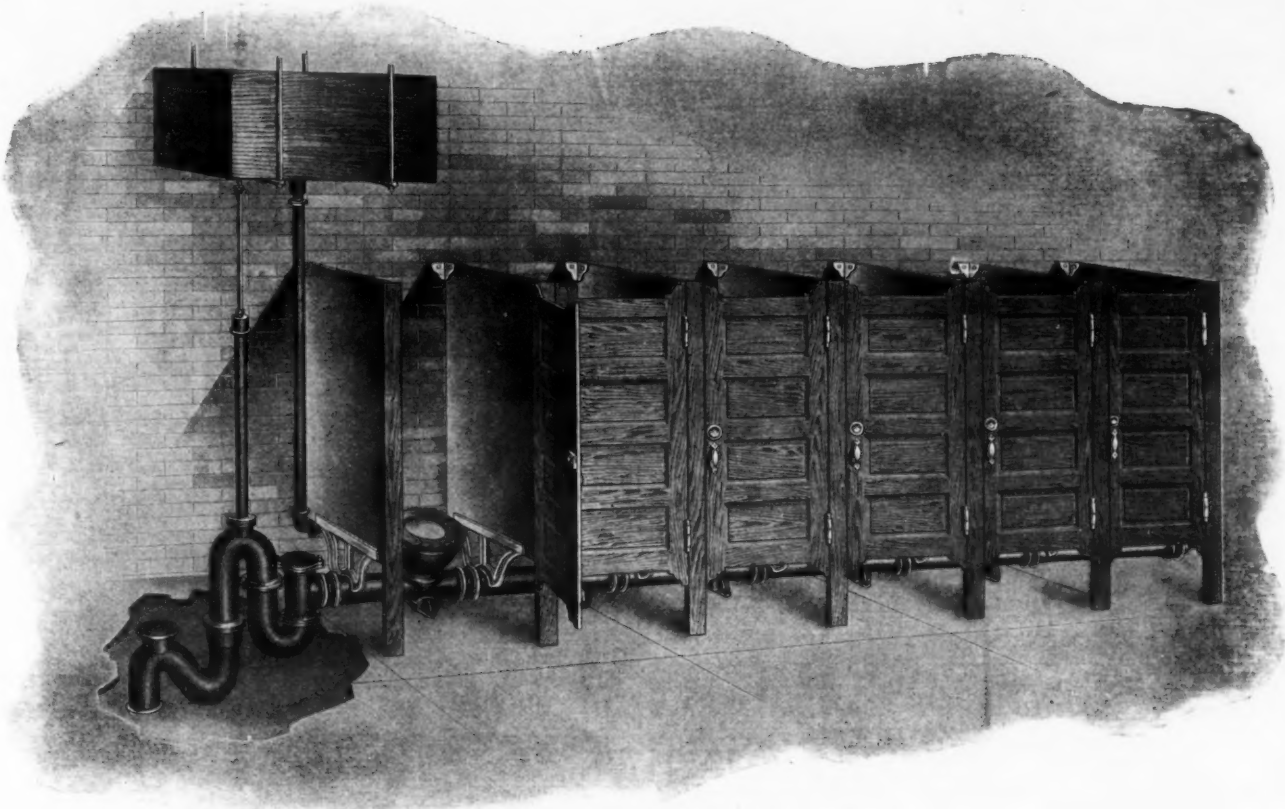
At each end of the building on each floor is a fire line, four inches in diameter. Piping exists for vacuum cleaner also.

In the classrooms the air is taken out through the cloakrooms, a register being put at the floor line from cloakroom into the vertical duct. Usually a register is put in the classroom wall also, to take the air from classroom to cloakroom; but in this building the same result is obtained by simply omitting the bottom portion of the door from the classrooms to cloakrooms. This has been favorably commented upon by all who have observed it.

Reckoning 15 square feet per pupil in the

(Concluded on Page 56)

You School-Builders of the Country



NELSON PNEUMATIC SYPHON HOPPER LATRINES

who are confronted with all sorts of plumbing problems and conditions, remember that NELSON PNEUMATIC SYPHON HOPPER LATRINES will answer every requirement for school toilet rooms in large and small cities alike.

If you are doubting between a Syphon Hopper Latrine and individual Closets why not have Nelson help you answer the question? Our reputation for school work has never been surpassed. Our school department can solve any problem for you, just as we have solved the plumbing problems in the schools in hundreds of cities throughout the country.

Write today for our catalogs on school plumbing.

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classrooms and special study room, the cost of the building complete does not exceed \$88, nor 14.1 cents per cubic foot. This is believed to be most economical for such construction in a district where New York prices prevail for both men and materials.

The building was designed by and erected under the supervision of Mr. Mason R. Strong, of New York City. The superintendent is Mr. Albert T. Bouck.

THE OAKLAND SCHOOL BUILDING INQUIRY.

(Continued from Page 11)

Buildings ought not to be over two stories in height, better one story, and the walls and floors should be made earthquake proof.

No building of less than two regular stories should be erected unless the size of the school grounds is sufficient to give not less than 6,000 square feet of available sunny playground for each regular classroom provided in the building.

A dust chute should be placed in all buildings more than one-story high.

A music room should be included in all grammar schools, 36 by 54 feet in size, with a stage at one end large enough for a band and orchestra or a class. Floor and walls should be deadened. This room may also be used for debating, etc.

There should be two outside gymnasiums—one for the boys and one for girls—roofed over and lighted for night use. Minimum size, 50 by 72 by 20 feet. There should be offices—one each—for the physical director and director of social activities.

The medical and emergency room, lavatories, rest and lunch room should be provided with hot water.

Subjects in which there is sufficient noise to be disturbing to regular classwork should be

arranged for in a separate building, or in one wing or in rooms one above the other.

In each new building there shall be at least one "Open-Air" schoolroom that cannot be entirely closed, preferably opening to the east.

In all new buildings there shall be provision made whereby every classroom may be easily transformed into an "Open-Air" room, such transforming measures not to be under the control of teachers and pupils.

One or more school buildings entirely of the open-air type should be erected. All halls and corridors should be so constructed that they cannot be entirely closed from the outside air.

All rooms designed as open-air rooms should be provided with some means for warming and drying. Most likely some method of direct radiation will be necessary.

(To be concluded in May issue)

A TECHNICAL HIGH SCHOOL.

(Continued from Page 15)

and electricity. One chemical laboratory is arranged for agricultural and manufacturing chemistry, and the other for the chemistry of foods. The latter adjoins one of the kitchens. This enables a teacher of cooking to illustrate the chemistry of the cooking by taking the pupils directly to the laboratory instead of passing them on to another teacher.

The sewing and millinery rooms are well equipped with tables, machines and storage cases. The course prepares for either home or trade work. The art rooms are attractively fitted up and can be thrown together by means of folding doors. The kitchens are ideal. Each girl has her own stove, oven and complete kitchen outfit. The suite is completely but simply furnished. The equipment is suitable for the teaching of serving, table manners, house-keeping and home nursing. The green house

makes possible the continuance of agricultural and horticultural work during the winter months.

The outdoor gymnasium and outdoor study hall lend an additional attraction to the school, an attraction which is not only a pleasure but a benefit. The gymnasiums are the most complete in the state of Ohio. The main gymnasium has a floor space 101x65 feet; it is equipped with three sets of floor and suspended apparatus, a liberal supply of bells, clubs, wands and chest weights, an excellent cork covered running track and is arranged to care for such indoor games as basketball, baseball, hockey, volley ball and wrestling.

The smaller gymnasium, 41x52 feet, will be used for lighter exercises and artistic work and such corrective exercises as can best be handled off the main floor.

The dressing rooms are supplied with the best sanitary steel lockers and ample bathing facilities.

The outdoor gymnasium consists of a timbered roof supported by large concrete columns and enclosed by a wire netting, giving a clear floor space of 40x90 feet free of all obstructions. The structure follows the lines of a Greek temple and adds to the beauty of the school grounds.

The athletic field in lay-out and construction is second to none. The quarter-mile cinder track, 16 feet wide and having a 150 yard straightaway 26 feet wide, is built according to the most approved methods and encloses two baseball diamonds, a football gridiron and numerous jumping pits. At one side are four regulation tennis courts properly built and drained.

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It is the aim of the school to afford a practical education to boys and girls who desire such, to aid those who wish help toward a trade, to prepare those who wish to enter higher technical schools and to offer to the girls in the household arts course an education which is invaluable to the homemaker. To both boys and girls the school dignifies and teaches the value of manual work. The various types of shops and laboratories afford wide choice in specialization. These include structural drafting, machine design, printing, pattern making, cabinet making, forging, machine shop practice, designing, catering, agriculture and horticulture, industrial chemistry, electrical construction and physical training. Pupils may specialize in the third and fourth years.

The building cost, with equipment, nearly \$700,000.

THE ARCHITECT AND HIS COMMISSION.

(Concluded from Page 8)

be the main source of needed information and assistance in supplying the 'personality' of the plan, but he should allow it to be involved in a rational, individual manner in harmony with the environment and the spirit of the times. The architect should bear in mind that he acts largely in the capacity of an adviser, and he must respect the owner's wishes unless he can convince him of his error with clear argument and clean-cut illustrations. In other words, he must demonstrate what detriment to the work would result if any erroneous measures that his client might desire are enacted. It is supposed that the client will seriously consider the architect's advice before it is rejected, for it represents the fruit of many years' study and experience, which cannot be safely disregarded. "Probably the most embarrassing moment in

the architect's intercourse with his client is when there arises a question of taste. Unless you know your man it may well lead to blows. Taste is a product of personality and environment, and good taste is merely a measure of local standards. The Indian's wigwam and his personal attire may conform as accurately to the precepts of good taste as the fashionably dressed American millionaire in his modern chateau. Many a layman considers himself a competent art critic who would never question the opinion of his lawyer or his doctor, or advance any views upon finance or attempt to explain a problem in engineering.

"All of these gentlemen may successfully hide their failures. Even the engineer may temporarily cloak his defective structure with the architect's mantle. Endowed with such powers for good and for evil there rests upon the architect a grave responsibility, demanding from him the highest form of mental and moral equipment. Let him but show his capacity for good deeds, let him but prove his worth, and the public can be trusted to give him place in the councils of the Nation."

THE SCHOOLHOUSE DEPARTMENT OF BOSTON, MASS.

(Continued from Page 13)

all matters relating to the planning and equipment of school buildings would be kept on file, so that no study of a problem would be lost, and the town would be saved the constant experimenting with architects to whom the school problem is new and unfamiliar, or worse still, with architects who are entirely familiar with the subject, but know it entirely wrong.

Summary.

The work of the Boston board has been useful and instructive. It has failed only through

lack of co-operation. It has shown, as has also the small Boston School Committee, the absolute wisdom of having expert advice on everything connected with the schools and then following it. If the advice of the expert is thought not to be good, then get another expert, but do not employ experts and disregard their advice. Most people value the opinion of lawyers and doctors, some are even willing to consider that of clergymen, but when it comes to questions connected with education or housing, nearly everyone considers himself an expert and believes he can pass as good a judgment as anyone else. This really is not true. A man who has risen in the teaching profession to be a Superintendent is familiar generally with his subject; an architect in any way fit to be at the head of the school building department of a city, or in charge of the buildings in a town, is pretty sure to know his job. The School Committee in dealing with problems of education and of building, may well trust to and be guided by men who make it their business to know about these things. This is a safe course in other branches of work and it is a safe course with the schools.

One word in closing about the architect. If he is a well trained man, he is an expert in a difficult profession and should be treated and paid as such. It is the worst possible economy to choose an architect from the bargain counter. The opportunities given the architect to put needless expense upon the owner are innumerable. Some may be opportunities of ignorance or indifference, some are opportunities of dishonesty. Carelessness in study of plans or in writing the specifications, ignorance of where true economy lies, may cost the owner more than the whole fee paid the architect. An architect who has been forced to reduce the amount

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If you could examine it carefully and test it thoroughly you would be forced to admit that it is far superior to the vises you are now using. Unless of course, they happen to be Richards-Wilcox Rapid Acting Vises.

And they probably are, for 3 out of every 5 manual training schools throughout the country use Richards-Wilcox Vises. But if they are not — if yours is one of the few schools that is not equipped with these easy operating vises — we will gladly send you one on 30-days' trial.

Richards-Wilcox Rapid Acting Vises are built by expert workmen—skilled in the art of Vise making—out of unbreakable steel that is guaranteed to stand the wear and tear of hard usage. Equipped with Phosphor Bronze Nut that engages entire circumference and operates full length of screw. No pawls, racks, or triggers to break or wear. Easy to operate for nut is completely disengaged when pressure on work is removed by slight reverse movement of handle.

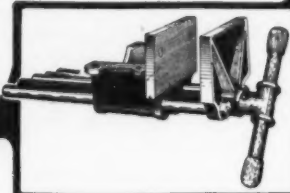
When pressure is applied, the nut engages and locks the screw firmly. Screw is cut with single sharp pitched thread, giving it twice the power of vises with double thread screws. Can be opened to any desired length. Far different, you see, from the old ordinary, cheaply constructed kind.

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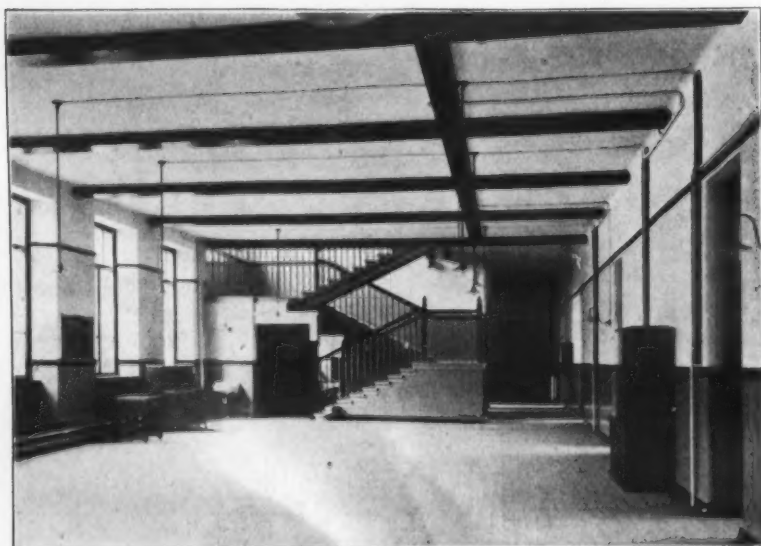
of his fair fee, is tempted to make up for it, by inadequate service, or worse still, by taking commission from contractors. In any and all such cases the owner pays in the end.

A skilled and faithful architect will save the owner more than his fee, and it is poor business to employ either an untried and inexperienced man, or one whose integrity is doubtful. Either of these may be cheap and may appear to be a bargain, but will prove a bad bargain.

PRIMARY SCHOOLS IN SCOTLAND.

(Concluded from Page 19)

classroom. The staircase is built partly of brick and steel frame and is covered with Leoch stone steps of a spandril section and is finished with plain iron balusters with a mahogany hand-rail.



HALL, EASTBANK PRIMARY SCHOOL.

Convenient to the staircase are the cloak-rooms, which are fitted with a range of basins, complete in every way from a sanitary point of view and in which is also placed a hook for each child's coat and cap.

The heating of the school is by hot water, low pressure; and the lighting, by gas with inverted incandescent burners.

Wellshot Primary School.

The Wellshot Primary School has been designed more for everyday convenience and practical use than for architectural effects. The exterior walls are built of stone with sandstone dressings, string and sill courses and a very heavy projecting mould stone eave course.

The roofs throughout are covered with slates

and are finished at the apex with a tile ridge. In the hall roofs, glass extends on either side from the gutter to the ridge piece.

The outside walls are two feet thick built of coursed rubble and faced for a thickness of eight inches with quarry faced coursers. This composite wall is well bounded together and set in hydraulic lime.

The inner walls which form the hall and cloakroom are eighteen inches thick and all openings are formed with segmental arches. Composite brick are used throughout and cement mortar is used in the building of the lower portion.

In forming the floors those of the hall and gangways are of concrete and steel frames while those of the classroom are of wood. To form

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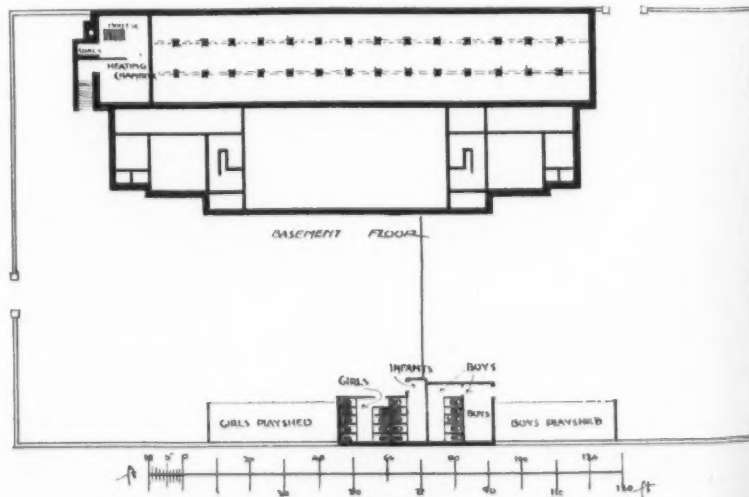


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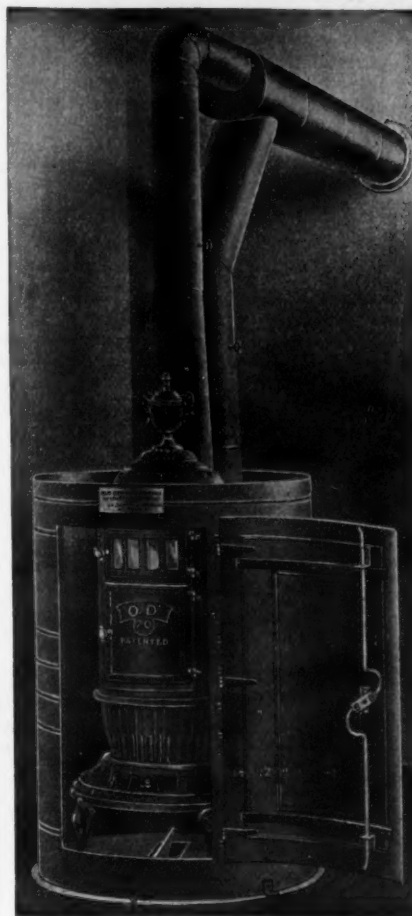
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It does not re-heat and circulate the foul air in the room. It warms the room with pure fresh air and combines a duct or pipe to exhaust the vitiated or foul air. No other system does this.

It does not require a separate independent foul air flue of brick or metal as all other systems do.

It is simple, easy to set up, and easy to regulate. All other systems are complicated.

It does not clog with soot and rot out, requiring expensive experts to repair; other systems do.

It draws the foul or vitiated air from the floor of room by a syphon suction combined with the heater; no other system can do or does do this.

It is the cheapest of all heating and ventilating systems, because it combines heater, ventilating drum, ventilating mat, stove pipe and foul air pipe or duct. Pipe furnished free five feet from center of heater, additional lengths of large pipe, 50c per foot. All other systems require expensive independent foul air flues or ducts, either metal, brick or stone.

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a support for the first and other floors heavy steel girders are thrown across from the outer to the inner walls several of the girders being allowed to project into the hall to form a support for the gangway.

On the top of the girders are placed 12 x 2½ inch pitch-pine joist at 18 inch centers. And to prevent the passage of sound from one floor to the other a rough floor of ¾ inch boarding was laid on the top. Then the whole area was covered with felt which was securely fixed by nailing a 2½ x 1 inch red pine strip on top of each joist.

The floors were then covered throughout with three (3") inch pitch-pine flooring.

All partitions dividing the classroom are of wood with glass in the upper portion and, where the classrooms are arranged in pairs, the partitions are arranged to fold in book form.

In the central hall, at either end, are placed the boys and girls staircases. Each is arranged with a complete series of flights for each floor and is constructed of stone steps and landing supported on steel beams. All the classrooms are arranged to seat sixty pupils and, in the cookery, laundry and woodworking departments the accommodations are for twenty pupils each.

The rooms are all finished with wood dado and plaster walls and ceiling. In the hall staircases and cloakrooms the dados are of tile finished on the top with a floral glazed band.

The heating is with hot water from a sectional boiler which is listed to heat 6,450 square feet of direct radiation. From the boiler are taken four flows and four return pipes which are continued forward in ducts to the four corners of the building where the rising mains are taken to the various floors. Each main heats a portion of each floor extending to the center of the building and each classroom has 100 square feet

of radiation which is obtained by the flow and return of the four inch hot-water pipe.

The hall and cloakroom are well supplied with radiators and the teachers' rooms are heated by open fires.

Natural ventilation is the system throughout the school; two up-current shafts being taken from each classroom which are conducted forward and connected to several large ventilators on the roof.

This school cost to build including furnishing £18372* which on a unit basis works out at £12 per pupil.

*Total cost approximately \$91,860 or \$60 per pupil.

DOWNWARD VENTILATION IN A ROCK-FORD, ILL., SCHOOLHOUSE.

(Concluded from Page 21)

All rooms show an absolute sense of proportion and freshness.

There is no noticeable effect on the conditions of the rooms caused by the glass exposure, but tests show a slightly higher rapidity in downward movement of the air surface several inches in from the glass.

The air distribution is positive and under normal schoolroom conditions, the aerial envelope around any individual is moving downward and does not come in contact with that of another but is discharged from the room without rising again to the breathing zone.

There is an entire absence of drafts or currents, and the cold surface of desks and furniture does not contrast against high temperatures of atmosphere surrounding them, as is often complained of in other systems.

During the week of December fifteen tests were conducted by the school authorities to determine the efficiency of this system. The temperature was uniformly 68 deg., and the humidity at 58 per cent. To demonstrate that

no cross currents existed, live steam was introduced into the room through the diffuser in the ventilating system. The steam distributed equally throughout the room and dropped gradually toward the floor, like a blanket, until it reached the level of the exits through which it escaped. Another test comprised the suspending of a large number of strings about the room with small pieces of paper attached to the end of each. The absence of any swaying of these pieces of paper showed that there were no cross currents generated by the ventilating system.

Some observations have been made of the amount of leakage. Readings of static pressures were taken with Ellison's differential draft gauge, which, being balanced at zero outside of the building, showed 0.03 in. pressure when connected with the inside of the room. All windows are provided with grooved weather strips, and are more than ordinarily tight, yet all these tests where steam was turned into the room showed a decided leakage outward, particularly between the meeting rails of the sash, which were purposely pried slightly open to allow a chance to observe if leakage was inward or outward.

Economy of operation is evident, but as yet no effort has been made to determine any facts or comparative saving. The studies of this method are obviously incomplete at this time, because there has not been time or the opportunity to continue an uninterrupted study.

The consensus of opinion with the members of the board of education is that the installation at Hall school is a decided success. Teachers are enthusiastic. Pupils show no signs of restlessness toward the close of the school day. The principal claims a noticeable improvement in the work done by both teachers and pupils.

Cost of Heating and Ventilating Plants

Building No. 1—3,200,000 cu. feet contents; cost 1.2 cents per cu. ft.
Building No. 2—2,370,000 cu. feet contents; cost 3.5 cents per cu. ft.

Building No. 1 is the Scott High School at Toledo, Ohio, designed by us. Building No. 2 is a high school in another state of similar type with a plant designed to give the same results but not designed by us. Both buildings have the same quality of equipment, both are of the all indirect type, with automatic temperature and humidity control, water tube boilers, smoke consumers, etc. The remarkable economy at Toledo was accomplished entirely by the arrangement of the apparatus in the building and the utilization of structural materials to the utmost refinement.

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Special attention given to the proper lighting, heating and ventilation of schools. Correspondence solicited anywhere.

A handsome book of School Houses ranging from one room up (perspectives and floor plans) will be sent to School Committees that are interested in the erection of buildings for which plans have not been procured.



ALABAMA.

Eclectic—The Elmore County High School will be rebuilt at a cost of \$12,000. State Supt. H. J. Willingham, Montgomery. Selma—Bids received March 8 for high school; \$35,000. W. T. Warren, Archt., Birmingham.

Huntsville—The board of education is contemplating the erection of a high school; \$20,000. Demopolis—Plans are being made for a new school to replace the one destroyed; \$25,000.

ARIZONA.

Phoenix—Archt. Royal Lescher has plans for 8-room school; \$25,000.

CALIFORNIA.

Taft—Archt. O. L. Clark, Bakersfield, will submit plans to the board of trustees of Conley School District for a school building; \$30,000. Jackson—Bids have been received for the erection of the Amador County High School. Mrs. G. F. Dornan, secy, board. Corcoran—Bonds, \$45,000, have been voted for a high school. Corcoran Union High School District.

Hanford—Archt. A. C. Martin, Los Angeles, has plans for one-story school. Catholic Church. San Gabriel—Archt. A. C. Martin, Los Angeles, has plans for addition to school building. Venice—Bids will be received for school to cost about \$30,000. W. Y. Thornbury, prin.

King City—Bids received March 1 for new school. E. A. Bunker, mem. co. board of education, Salinas. Sacramento—Site has been selected on G and H Sts. for a new school. East Sacramento. Watsonville—Bonds will be voted on for new high school. T. S. MacQuiddy, Supt. Long Beach—Contract has been let for plans for new schools to A. Burnside Sturges, Archt., Los Angeles. The plans of the board call for two 6-room units at a cost of \$28,000 or a 16-room building costing \$45,000.

COLORADO.

Brighton—Bids received for 2-story school; \$23,000. H. H. Hewitt, Archt., Denver.

CONNECTICUT.

Stamford—Archt. Nelson E. Emmons has plans in progress for 8-room school building; \$30,000. Enfield—A building committee has been selected to secure a suitable site for a new school.

Windsor—Figures received March 17 for 2-story school building; \$20,000. Whiton & McMahon, Archts., Hartford. Hartford—Archts. Whiton & McMahon, Hartford, have plans in progress for 2-story school building; \$55,000. Thompsonville—Archt. Isaac Allen,

Jr., Hartford, has plans in progress for 2-story school building.

Bridgeport—Archt. J. G. Rogers, New York, N. Y., has been commissioned to prepare plans for 3-story high school; \$400,000.

DIST. OF COLUMBIA.

Washington—Figures will be received for 3-story high school; \$1,000,000. Snowden Ashford, Archt., Wm. B. Ittner, Assoc. Archt., St. Louis, Mo. Plans will be ready for estimates next summer for a colored high school; \$550,000. Snowden Ashford, Archt.

FLORIDA.

Fort Pierce—The St. Lucie county board of education is planning the erection of a school to cost \$75,000. Jacksonville—The Florida Military Academy will establish an academy. Geo. W. Hulvey, supt., Green Cove Springs.

GEORGIA.

Savannah—The Fairhope Land Company has plans for the erection of a cottage system of school buildings. A. B. Offenbacher, general manager, Savannah. Milledgeville—The board of education will rebuild the Hopewell school. W. A. Torrance, contractor. Waycross—The school board is considering the erection of a high school.

IDAHO.

Georgetown—Archts. Elliott & Blough, Pocatello, have plans for 3-story school building; \$20,000. Chris. Sorenson, clk.

ILLINOIS.

Lawrenceville—Bids will be received shortly for 4-room addition to school building; \$18,000. L. H. Osterhage, Archt., Vincennes. Lovejoy—Bids will be received for 6-room school; \$18,000. A. B. Frankel, Archt., East St. Louis. Dixon—Archt. M. H. Vail has preliminary plans in progress for 2-story addition. St. Patrick's Church. Wapella—Bids received March 17 for 6-room school building. A. L. Pillsbury, Archt., Bloomington. Springvalley—A special election will be held to vote on the question of a high school building. Dr. J. Moran, pres. Bloomington—A parochial school is contemplated for the Holy Trinity Church. Rev. M. Weldon, pastor.

Chicago—Figures received March 26 for 3-story addition to Parkside Branch School. A. F. Hussander, Archt. Melrose Park—Figures are being received for 2-story school building. Edward Benson, Elgin—Archts. G. Morris & W. Abell are preparing preliminary plans for 2-story school building. F. B. Perkins, secy. LaSalle—Bids received May 1 for 2-story addition to high school; \$100,000. J. H. Barnes, Archt., Joliet. Virgil—Bids are being received for 2-story school building and sisters' home. Catholic Church; \$15,000. Guido Beck, Archt., Dubuque, Ia.

Chicago—Figures received March 12 for 12-room addition to Lowell school. A. F. Hussander, acting architect, bd. education. Figures received March 12 for 3-story addition to Oglesby school. A. F. Hussander, acting architect, bd. education. Virden—Two-story high school is contemplated; \$40,000. A. M. Hale, secy. Bloomington—Election will be held March 25 to vote on bonds for a high school building. R. E. Williams, clk. La Salle—A recreation building will be erected including a gymnasium, auditorium, swimming pool, clubrooms and other conveniences; \$75,000. Chicago—Plans have been approved for 23-room Rellly school to be erected at School St., Lawndale and Mon-

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ticello Aves. Mt. Carmel—An election will be held to vote on the question of a new high school. It is expected that plans will be rushed for the immediate construction of the building.

INDIANA.

Indianapolis—An 8-room addition is contemplated for a grade school. J. E. Cleland, dir. Vincennes—Contract is to be awarded shortly for a 2-story school. St. John Luth. Church; \$12,000. L. H. Osterhage, Archt. Valparaiso—Archt. C. E. Kendrick, Gary, has plans in progress for 2-story school building. L. W. Stevens, trus., Boone Grove. Carlisle—Archt. J. W. Gaddis, Vincennes, has plans in progress for 2-story school; \$35,000. J. F. Sprout, trus. New Harmony—Archt. J. W. Gaddis, Vincennes has plans in progress for 2-story school building; \$25,000. C. E. Stevens, secy. Clifford—Archt. E. E. Dunlap, Indianapolis, has plans for 5-room school; \$10,000. Bids received March 21. Lexington—Archt. J. W. Gaddis, Vincennes, has plans for 6-room school building with assembly hall. W. O. Green, trus.

Indianapolis—Archts. R. P. Daggett & Co., have plans in progress for 8-room school building. J. E. Cleland, bus. dir. Waynetown—Figures received March 22 for 2-story high-and-grade school; \$35,000. G. W. Ashby, Archt., Chicago, Ill. Monroeville—Bids received April 4 for 2-story school building including a gymnasium and a manual training department; \$45,000. Griffith & Fair, Archts., Ft. Wayne; W. E. Johnson, trus. New London—Bids received March 17 for 8-room school with assembly hall, gymnasium, domestic science and manual training rooms; \$30,000. E. E. Dunlap, Archt., Indianapolis; W. H. Newlin, trus. Monterey—Archts. Freyermouth & Maurer, South Bend, have plans for 2-story school (rem.); \$9,000. H. C. Rheinholt, secy. Culver—Contract will be let soon for 4-room school, near town of Culver; \$8,000. Freyermouth & Maurer, Archts., South Bend; Mr. Castleman, trus. Granger—Figures will be received for one-story country school; \$4,000. Joseph Wolf, trus. Clay Twp. Elkhart—The trustees of Baugo Township contemplate the remodeling of the school building or the erection of a new 5-room building. J. D. Bristol, R. F. D., Elkhart. Terre Haute—The Indiana State Normal Trustees have begun preparations for the erection of a science and manual training building for the Normal School; \$125,000. Woodburn—The citizens contemplate the erection of a school to cost \$20,000.

Alamo—Archt. Layton Allen, Indianapolis, has plans for 4-room school building. J. B. Hopping, trus., R. F. D., Crawfordsville. Wilkinson—Two school buildings will be remodeled and additions erected; \$10,000. C. W. Gordon, Archt., Greenfield. Muncie—Sites are being considered for new Riverside school in the seventh district. Andrews—A joint township and town school will be erected for Dallas township and the town mentioned. Lincoln Hoke, Huntington, contractor.

IOWA.

Hull—Bids received March 15 for 2-story school. R. Rens, Mason City—The board of education has authorized that \$65,000 be spent on new buildings and improvements. Russell—The high school building has been condemned and a new structure will probably be erected. Center Junction—The citizens have voted to erect a new school not to exceed \$9,000 in cost.

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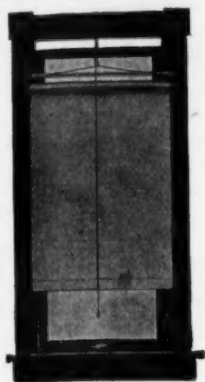
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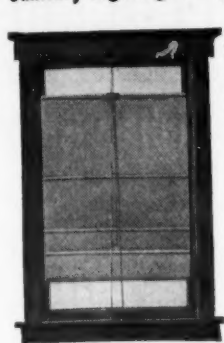
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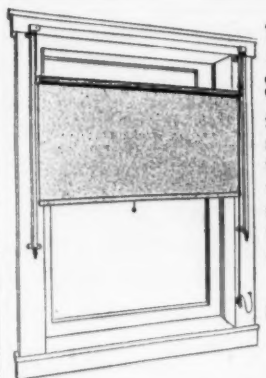
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NEW YORK CITY

Burlington—Bonds, \$50,000, have been voted for school on North Hill. Leon—Center township is considering the erection of a central high school. Clarion—The school board plans the erection of a new school building. Ware—The citizens have voted to build a high school building to cost about \$4,000. Anita—Bonds, \$32,000, have been voted for new school. Oskaloosa—Bonds have been voted for a schoolhouse. Address, L. T. Shangle, secy.

Sioux City—The school board contemplates the erection of the 2-story Hawthorne school. T. C. Prescott, secy. Central City—Agitation has been started for school. Grinnell—Agitation has been started for school. Westfield—School will be erected. Cedar Rapids—An election will be held to vote on the issuance of \$40,000, bonds, for the erection of a school in Grant District, in the southern section of the city.

KANSAS.

Bern—Arch. A. O. Bauer, Horton, has submitted plans for 2-story high school; \$15,000. Olmitz—Arch. H. W. Brinkman, Emporia, has plans for 2-story school, Catholic Church; \$5,000. Rev. Fr. Huna, pastor. Hutchinson—A 16-room school will be erected on Sherman Street to cost approximately \$50,000. J. O. Hall, Supt.

Blakeman—Arch. L. M. Wood, Topeka, has plans for 4-room school building; \$6,000 to \$7,000. Mrs. Belle Anderson, clk. Fredonia—A high school building is contemplated; \$60,000. Topeka—Figures will be received for 4-room school building; \$10,000. F. P. Rude, pres.

KENTUCKY.

Ft. Thomas—Archts. Weber, Werner & Adkins, Cincinnati, O., have plans in progress for 16-room school; \$50,000. David Davies, pres. Bedford—Archts. Gray & Wischmeyer, Louisville, have plans for 2-story high-and-grade school with auditorium. G. P. Heath, pres. Glenview—Bids received for 2-story grade school with assembly hall. J. B. Hutchings, Archt., Louisville.

LOUISIANA.

Homer—The city has voted a tax for a 3-story fire-proof school; \$40,000. New Orleans—Bids received February 28 for 2-story school. A. G. Ricks, commissioner.

MASSACHUSETTS.

Belmont—Arch. William Chapman, Boston, has plans in progress for 2-story school building; \$40,000. Geo. C. Flett, chm, comm.

Springfield—Archts. Kirkham & Parlett will prepare plans for commercial high school; \$200,000.

Boston—Arch. Wm. W. Bosworth, New York, N. Y., has plans in progress for group of technology buildings. Marblehead—Archts. Pearce & Quiner, Boston, have plans for 2-story school building; \$85,000. C. A. Ferguson, Boston. Framingham—Arch. C. M. Baker, Boston, has plans in progress for 12-room school building; \$65,000. Dr. E. H. Bigelow, chm, building committee.

MICHIGAN.

Highland Park—Figures received in a short time for 2-story addition to Ferris school. W. D. Butterfield, Archt., Detroit. Muskegon—Bids are being re-

ceived for 2-story school building, St. Jean Baptiste Catholic Church; \$17,000. Rogers—Arch. T. E. White, Lansing, has plans in progress for 2-story high school. Bay City—The city will erect a high school to cost \$100,000. Owosso—A 4-room addition to school is contemplated this spring; \$16,000. Ironwood—Archts. Anderson & Williams, Green Bay, have drawn plans for 3-story school building to be equipped with blackboards, electric bells, fire escape, plumbing, telephone system and ventilators.

Detroit—Figures received April 1 for 4-room addition to school, St. Anne's Parish. U. E. Cloutier, Archt. Bids received March 12 for 4-room addition to school. Peter Dederichs, Archt. N. rway—Figures received April 1 for 3-story high school. J. D. Chubb, Archt., Chicago, Ill. Adrian—Bids are being received for 3-story school building. Peter Dederichs, Archt., Detroit. Benton Harbor—Bonds, \$60,000, have been voted for high school building. Greenland—Two schools will be erected. Derrick Hubert, Archt., Menominee, Mass.—Two schools will be erected. Derrick Hubert, Archt., Menominee. Pittsford—The citizens have voted to build a 2-story addition to the school to cost about \$6,000. Menominee—Arch. Derrick Hubert has exhibited plans for the new manual training building.

Flint—Arch. E. A. Bowd, Lansing, has plans for school for deaf; \$400,000. F. D. Clark, Supt. Bids will be received this spring for 2-story school building; \$70,000. Malcomson & Higginsbotham, Archts., Detroit. Contracts will be let April 1 for 2-story school and church. St. Matthew's Parish; \$30,000. Proposals received March 19 for 12-room school, Homedale Addition in the Second Ward. Malcomson & Higginsbotham, Archts., Detroit. Goodrich—Figures will be received for one-story school building; \$10,000. Dr. A. S. Wheelock, secy. Wyandotte—A two-story addition to school is contemplated this summer by the St. Patrick's school authorities. Rev. Jas. H. Hally, dir. Ann Arbor—Bids received March 10 for 4-room school. Clement & Lorch, Archts. Memphis—Bids received March 1 for 2-story school. Isaac Erb, Archt., Port Huron. Stronach—Bids received February 25 for school in Stronach twp. Frank Moser, chm.

MINNESOTA.

Faribault—Bids will be received for 4-room school building with auditorium, stage, dining and club rooms, kitchenette and bowling alley. Alban & Hausler, Archts., St. Paul. Finlayson—A new school will be erected. Grand Rapids—Arch. Sullivan of Duluth, Minn., has revised the plans for the new consolidated school in the town of Blackberry, near Grand Rapids; \$3,000 to \$4,000. G. E. Keenan, Supt., Dist. No. 6. Keewatin—A school will be erected to cost about \$90,000. Bray & Nystrom, Archts., Duluth.

Jackson—Figures received March 28 for 14-room ward school. K. T. Snyder, Archt., Minneapolis.

Austin—Archts. Alban & Hausler, St. Paul, have plans for the Webster and Whittier schools. Madella—Arch. E. S. Stebbins, Minneapolis, has plans for new high school. Figures will be received latter part of March. Tracy—Archts. Alban & Hausler, St. Paul, have plans for school; \$35,000.

MISSOURI.

St. Louis—Bids will be received for 3-story addition to school; \$125,000. Hans Toenfeld, commiss. Bids will be received for 3-story school building; \$75,000. Wm. B. Ittner, Archt. Oak Grove—Figures will be received for 2-story school building; \$20,000. J. H. Felt & Co., Archts., Kansas City. Springfield—Archts. Miller, Opel & Torbitt have plans for 2-story school for St. Agnes congregation; \$10,000. Rev. Fr. Sheridan, rector.

Kansas City—Figures received April 1 for 2-story Moore school; \$50,000. C. A. Smith, Archt. Figures received March 15 for 2-story Harrison school; \$45,000. C. A. Smith, Archt.; J. B. Jackson, Jr., secy.

NEBRASKA.

Creighton—The Catholics will erect an addition to the academy building. Holbrook—The school board is considering an addition to the school building. Wahoo—The school board is considering the issuance of bonds for the erection of two schools. Milligan—A high school is contemplated to cost \$20,000. Clarks—Bonds, \$16,000, have been voted for school improvements. Clarkson—Bonds have been voted for schools. Neligh—Bonds, \$30,000, have been voted for high school.

NEBRASKA.

Omaha—An industrial high school will be erected; \$500,000. W. T. Bourke, secy. Central City—A 2-story high-and-grade school is contemplated; \$60,000. Bruning—A 2-story school building is contemplated; \$10,000 to \$12,000. Polk—Two-story addition will be erected this spring; \$8,000. Loup City—Propose the erection of a 2-story high school; \$30,000. Albion—School will be erected. Hull—Bids received March 15 for 2-story school. Wood River—School will probably be erected.

NEW JERSEY.

Bloomfield—Arch. J. F. Capen, Newark, has plans in progress for seminary building; \$60,000. National Park—The citizens have voted to build a new school; \$5,000. Penn Grove—The Citizens are considering sites for a new high school Gloucester City—A special meeting has been called to decide on the site for the First Ward School.

New Brunswick—Arch. W. H. Boylan has plans in progress for 3-story addition to school, St. Peter's Church, Rev. J. A. O'Grady, rector. A high school building is proposed. Morris Bauer, secy board. Metuchen—School will be erected; \$15,000. Essex Fells—Bids received March 4 for one-story school. Forman & Light, Archts., New York, N. Y. Haddon Heights—Sites are being discussed for new school on the West Side.

NEW YORK.

Rochester—Bids received March 10 for 4-room addition to School No. 5. E. S. Gordon, Archt. Sloan—Bids received March 17 for school building; \$60,000. W. S. Brickell Co., Archts., Buffalo. Franklinville—Arch. O. Dockstader, Elmira, has plans in progress for 2-story addition; \$40,000. Belfast—Figures will be received shortly for 2-story school building; \$30,000. Pierce & Bickford, Archts., Elmira. Canisteo—Arch. Otis Dockstader, Elmira, has preliminary plans in



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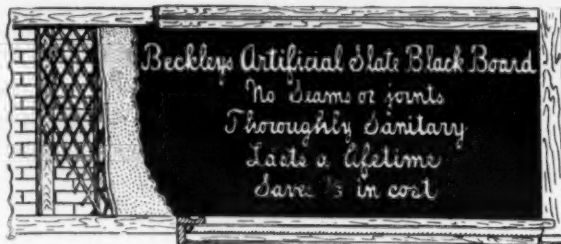
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progress for 2-story school building; \$23,000. Hammond—Plans will be received March 15 for high school; \$30,000. Schenectady—Drawings have been submitted by the city engineer for five new school buildings. Rockville Center—The citizens will hold an election to vote on bonds for an addition to the high school.

New York—Archts. Howells & Stokes have plans in progress for 3-story school building; \$250,000. New York—Plans are nearing completion for 4-story school building, Borough of Brooklyn; \$360,000. C. B. J. Snyder, Archt. Syracuse—Proposals will be received in a short time for 12-room addition to Genesee school; \$80,000. A. L. Brockway, Archt. Jamestown—Architects have submitted plans for 10-room addition to school including assembly hall, domestic science and manual training rooms. A. A. Amidon, pres. Jamestown—Architects have submitted plans for 6-room addition with assembly hall. A. A. Amidon, pres. Mohawk—Archt. Walter Frank, Utica, has plans in progress for addition to school; \$20,000. J. D. Fitch, pres. Oneida Castle—Archt. Walter Frank, Utica, has plans in progress for school building; \$16,000. Mr. Rathbun, county clerk, Utica. Alden—Bids will be received April 1 for 2-story addition to school; \$8,000. W. S. Brickell & Co., Archts., Buffalo.

East Islip, L. I.—Archts. R. C. Velsor, Islip, L. I., has plans in progress for 2-story school, St. Mary's Church; \$15,000. Rev. Joseph Slinkmajer, rector. New York—Archts. C. B. J. Snyder has plans in progress for a 3-story school building in Ozone Park, L. I.; \$140,000. Richmond Hill—Bids will be received shortly for 3-story school, St. Benedict's Church; \$40,000. T. H. Poole & Co., Archts., New York, N. Y. Port Chester—Archts. W. A. Ward has plans for 2-story addition to school including an auditorium; \$31,000. Syracuse—Bids received March 3 for addition to Bellevue school. Russell & King, Archts. Canastota—Figures received April 1 for 2-story addition to grade school; \$14,000. H. D. Phoenix, Archt., Syracuse Fulton—Figures will be received for 8-room school building; \$22,000. J. Mills Platt, Archt., Rochester. A high school is contemplated to cost \$100,000. L. C. Foster, Cobleskill—Plans are in progress for 2-story school building with auditorium; \$65,000. Wm. T. Townner, Archt., New York City. Angola—Archts. E. E. Joralemon, Buffalo, has plans for remodeling of school and new building; \$50,000. Mr. Blackney, pres. Oswego—Archts. L. L. Cope, Oswego, has plans for 3-story high school; \$35,000. C. W. Richards, Supt. Gouverneur—School will be erected; \$75,000. W. F. Leonard, chm. committee. Great Neck—Work will begin in about six weeks on a three-story high school to include a gymnasium, manual training and domestic science, lavatories, assembly hall, principal's office, teachers' rooms, recitation rooms and laboratories; \$75,000. New York—Site has been secured for school at East 84th and East 85th Sts. St. Ignatius Loyola school. Bids received March 7 for school in the Fifth Ward; \$59,000. Huntington, L. I.—The citizens have appropriated \$58,000 for a ten-room school, to be erected so that additions may be built at a small cost.

NORTH CAROLINA. Edenton—The city is planning the erection of a school to cost \$20,000. Address The Mayor.

NORTH DAKOTA.

Jamestown—Archts. Fellows, Perkins & Hamilton, Chicago, Ill., have plans in progress for 2-story school building; \$40,000. Bowdon—An election has been held which favored the erection of a new school. St. John—Archts. J. A. Shannon, Devils Lake, has plans for addition to high school.

Sentinel Butte—An addition is contemplated for the school building to cost about \$10,000. Sherbrooke—\$6,000, bonds, have been voted for the enlargement of the school building. Portal—Bonds, \$13,000, have been voted for the erection of a school. Sykeston—A school will be erected this summer. Heaton—A new school is contemplated.

Lignite—A new school will be erected. Stanley—Bonds, \$7,000, have been voted for addition to school.

OHIO.

Cincinnati—Bids have been received for 3-story addition; \$250,000. Henry Mersch, clk. Newark—Bids are being received for 4-room addition. Vernon Redding, Archt., Mansfield. Canal Dover—Bids received April 1 for 4-room school building. F. L. Packard, Archt., Columbus. Coshocton—Bids received March 25 for erection of Central school. F. L. Packard, Archt., Columbus; T. H. Wheeler, clk. Hudson—Bids received March 12 for 14-room centralized school; \$80,000. Clarence Bouton, clk. Fremont—The board of education will raze the old building and replace it with a new one.

Youngstown—Figures will be received this spring for 12-room school with auditorium; St. Patrick's Church; \$50,000. C. F. Owsley, Archt., Youngstown. Oakwood—Proposals received March 29 for school building. Louis L. Lott, Archt., Dayton. Springfield—Bids received April 4 for addition to school and remodeling. O. B. Minnich, clk. Pike Twp. School Dist. Hanover—Archts. Howard & Merriam, Columbus, have plans in progress for 6-room school building; \$20,000. Pleasant Plain—The school board has discussed the question of a new school.

Cleveland—Three-story high school is contemplated; \$175,000. C. T. Rose, clk. Cincinnati—Bids received in a short time for 3-story school building; \$400,000. Garber & Woodward, Archts. Dayton—Figures received April 1 for 10-room school, Holy Trinity Church. Rev. J. H. Schengler, pastor. Figures received March 15 for combination school and church, Holy Cross Church; \$12,000. W. L. Jaekle, Archt., Springfield—Figures received March 15 for 2-story addition to high school; \$30,000. Pretzinger & Musselman, Archts., Dayton. Coshocton—Figures received March 25 for 14-room high school; \$80,000. F. L. Packard, Archt., Columbus. Bucyrus—Bids received March 18 for 2-story addition to school; \$20,000. F. L. Packard, Archt., Columbus. Pickerington—Figures received March 15 for 8-room school building; \$25,000. Howard & Merriam, Archts., Columbus. Berlin Heights—The citizens have voted \$12,000, bonds, for a high school building. Youngstown—The school board has discussed the arrangements for the erection

of the new South Side school; \$80,000. C. F. Owsley, Archt., Youngstown.

PENNSYLVANIA.

Ephrata—Archts. E. Z. Scholl, Reading, has plans for 8-room school; \$20,000. Bids received March 15. Wilkesburg—Figures are being received for one-story school building; \$6,500. F. M. Miller, Archt., Wilkesburg. Warren—Archts. E. A. Phillips has plans in progress for 6-room addition. Westfield—Plans will be accepted March 15 for high school; \$28,000. L. E. Knapp, chm. comm. Johnstown—Bids received March 18 for 3-story school in the Twentieth Ward. J. E. Lucas, Archt., Easton—Bids received March 21 for school on Reeder St. D. C. Sandt, chm. comm. Erie—The school board has selected J. W. Yard & Son, Erie, to prepare plans for the 36-room building which will be part of a district high school at Seventh and East Ave.

Catasauqua—Bids received March 20 for one-story school building; \$8,000. Jacoby & Weishampel, Archts., Allentown. J. J. Williams, secy. Bids received April 10 for 10-room school; approximate cost \$50,000. Henry Weber, secy. No. Catasauqua Dist.; Paul Miller, Archt., Hershey—Figures received March 22 for 2-story school building; \$80,000. C. E. Urban, Archt., Lancaster. Quincey—Archts. M. I. Kast, Harrisburg, is receiving figures for 2-story school building (alt.); \$15,000. Rev. Kittzmillier, secy., United Brethren Orphanage. Pennsboro—Archts. C. H. Bernheisel, Harrisburg, has plans in progress for 2-story addition to Enola school, East Pennsboro. Columbia—Archts. G. E. Paulus has plans for 2-story school building. Philadelphia—The board of education is considering the erection of an auxiliary building for the Northeast high school.

Johnstown—Figures received March 18 for 2-story school building; \$75,000. C. H. Meyers, secy. Archt. W. R. Myton has plans for 3-story school, St. Cadmer's Church. Rev. E. Denbinski, pastor. Archt. E. J. Lucas has plans for addition to school; \$40,000. C. H. Meyers, secy. Figures received March 10 for alterations to school building; \$15,000. Rev. H. Erdman, pastor Zion Luth. Church. McKeesport—Archts. Carlisle & Sharrer, Pittsburgh, have plans for 2-story school, St. Pius' Church. Rev. J. M. Rae, pastor. East Mauch Chunk—Figures will be received for 2-story school with auditorium, St. Joseph's Church; \$20,000. M. G. Prutzman, Archt., Mauch Chunk. Pittston—Archts. Reilly & Schroeder, Wilkesbarre, have plans for 2-story school building; \$18,000. Dubois. Bids will be received April 1 for 2-story addition. Sandy twp. W. H. Overdorf, Archt., Ambridge. Archts. Williams & Boyer, Pittsburgh, have plans for 12-room school. Figures received April 1. Moosic—Archts. Davey & Crowther, Scranton, have plans for 8-room school building. Crafton—The citizens propose an issuance of bonds for new high school.

RHODE ISLAND.

Providence—School will be erected on a site to be selected between Hope St. and Blackstone Blvd.

SOUTH CAROLINA.

Dunbarton—The school trustees have authorized the

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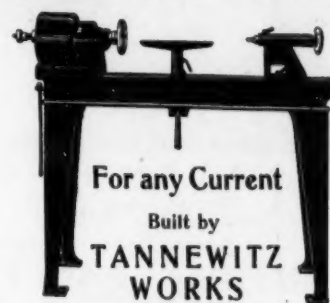


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preparation of plans for a 2-story school. B. F. Anderson, chm.

SOUTH DAKOTA.

Huron—Archd. G. C. Miller, Chicago, Ill., has plans in progress for 2-story high school; \$90,000.

Geddes—A Catholic school is contemplated to cost \$20,000. J. J. Mohan, Lake Andes—The Catholics will erect a school to cost \$20,000.

TENNESSEE.

Alamo—The city plans to erect a school building to cost \$20,000. Address The Mayor, Knoxville—The board of education is having plans prepared for four-room addition to Powell school; \$5,000. Union City—The citizens plan the erection of a new school. Address The Mayor.

Nashville—Propose erection of Hirschberg building on Seventh Avenue and Broadway. A. E. Hill, pres.

TEXAS.

Texarkana—Contract will be let within thirty days for the erection of a 10-room school; \$30,000. Witt & Seibert, Archts., Texarkana. Clarendon—Two-story school will be erected; \$20,000. J. S. Hayter, secy. Brazoria—Bids received for 2-story school building. Layton & Smith, Archts., Houston. Pleasanton—Bids received March 18 for 2-story school building. C. H. Page & Bros., Archts., Austin.

Richards—The Richards Independent School District has awarded the contract for a school; \$5,000. Groveton—The Central high school which was recently destroyed, will be rebuilt. Rosenberg—Site has been selected for new school. San Antonio—The school board contemplates the erection of a school for the Beacon Hill District. Samuel Harris, mem. board. Childress—The school board has adopted the plans of Archt. E. G. Withers, of Stamford, for the new high school; \$28,000. H. S. Crawford, pres. board.

Dallas—An addition will be built to the Bowie school to cost \$20,000 and one to the Hogg school costing \$10,000. Dialville—Bids received March 1 for school. J. H. Odom, pres. Houston—The Catholic Church will erect a school. Rev. R. A. LaPlante, rector. Texarkana—The West Side school board will erect a school in Rose Hill District to cost \$35,000. Address Stewart Moore, Archt. Big Spring—The school board is discussing the question of a new high school or additions to the old building. Slaton—Contract has been awarded for the construction of the new 7-room school; \$15,000. Henderson—Archt. C. G. Lancaster, Marshall, has awarded the contract for the construction of the new school; \$25,000. Goliad—Bonds, \$25,000, have been voted for high school. T. S. Cox, Supt.

UTAH.

Ogden—The school board has instructed their architect to prepare a sketch of a gymnasium building properly equipped, which would cost approximately \$75,000. Hyrum Pingree, pres. board.

Midvale—Archt. N. E. Liljenberg, Salt Lake City, has been ordered to prepare plans for an 8-room school.

VERMONT.

St. Johnsbury—Archt. L. S. Newton, Hartford, Conn., has been selected as architect of the proposed new 2-story school.

VIRGINIA.

Carson—Bids received March 6 for high school. Dr. E. E. Powell, McKenny.

Carson—The Rowanta School District and the Templeton School District have awarded a contract for a 6-room school with auditorium; \$4,880.

Parkley—The city will erect a school to cost \$20,000. Address The Mayor. Amherst—A committee has been appointed to promote sentiment for a new school to cost \$15,000. A. E. Strode, chm. Petersburg—The finance committee of the city council has recommended the appropriation of \$100,000 for the erection of two new school buildings for colored children to be erected on Peabody and Jones Streets respectively.

WASHINGTON.

Tacoma—Bids received March 15 to April 15 for Lincoln high school; \$325,000. Tulalip—Proposals will be received April 7 for addition to Tulalip Indian School. F. H. Abbott, act. coms., Dept. Interior. Washington, D. C. Centralia—A school will be erected at the Ford's Prairie, west of the city; \$8,000. Blaine—An election will be held to vote on a site for a new high school. O. K. Middleton, mem. board.

Bellingham—An election will be held in April to vote bonds for a new high school.

WEST VIRGINIA.

Adamston—Archt. S. W. Ford has been selected for the designing and supervision of the new school to be built at Northview. 12 classrooms, auditorium, gymnasium, offices and recreation rooms.

Clarksburg—The Catholic Church of the Immaculate Conception is preparing plans for a school on East Pike St.; \$50,000. Christian Brothers, directors. Parsons—Bids received March 18 for high school, Black Fork District. Holmboe & Lafferty, Archts., Clarksburg; H. A. Ridgway, secy. Martins Ferry—The school board is making plans for the erection of one or two new schools in the upper end of the city.

WISCONSIN.

Monticello—Contracts have been let for work on high school. F. H. Kemp, Archt., Beloit. Nekoson—School will be erected; \$35,000. Oconto—Plans are being prepared for school, St. Joseph's Church; \$25,000. Rev. J. A. Selbach, Stetsonville—School will be erected.

Milwaukee—Figures received April 1 for 2-story school and church, St. Roberts R. C. Church; \$25,000. Van Ryn & DeGelleke, Archts., Horicon—Bids received March 28 for school. St. Stephen's Luth. Church. W. F. Bossmann, Archt. Superior—Plans have been approved for the addition to the Carpenter school; \$65,000. F. H. Irons, Archt. Milwaukee—High school will be erected at South Milwaukee; \$40,000.

Milwaukee—Figures received March 10 for 3-story Riverside high school; \$235,000. Van Ryn & DeGelleke, Archts., Milwaukee. New Holstein—Archt. W. F. Hilgen, Cedarburg, has plans for 2-story addition. Wausau—Bids will be received March 10 for school, St. Ladislaus Church at Bevent. Rev. I. Mordarski, pastor; Frank Spalenka, designer. Stevens Point. Boyceville—Proposals received March 15 for 4-room school. W. O. Naset, Archt., Sparta; Mrs. C. W. Hayes, clk., joint school dist. No. 1. Oakfield—Bids received February 28th for school, St. Luke's Lutheran Church. Robert Reichert, secy.

COMING CONVENTIONS.

Apr. 3-5. Northern Indiana Teachers' Association at Indianapolis. E. H. Drake, Elkhart.

Apr. 3-5. Southern Illinois Teachers' Association at Centralia. A. E. Summers, Mt. Vernon, pres.

Apr. 3-5. Southeastern Iowa Teachers' Association at Fairfield. Elizabeth Burgess, Ottumwa.

Apr. 3-5. West Central Nebraska Teachers' Association at North Platte. Miss Theo Hansen, secy.

Apr. 11-12. Classical Association of the Middle-West and South at Indianapolis, Ind. G. E. Barber, Lincoln, pres.

Apr. 11-12. Western Wisconsin Teachers' Association at LaCrosse.

Apr. 11-12. Central Missouri Teachers' Association at Warrensburg. S. T. Bratton, Warrensburg, secy.

Apr. 11-12. South Texas Educators' Association at Corpus Christi. M. Menger, secy.

Apr. 11-12. Colorado Teachers' Association (science section) at Denver. A. L. Patton, pres.

Apr. 12. Central West Texas Teachers' Association at Stamford. L. T. Cunningham, Anson.

Apr. 15-18. Conference for Education in the South at Richmond, Va. A. P. Bourland, Washington, D. C., executive secretary.

Apr. 16-18. Inland Empire Teachers' Association at Spokane. B. M. Watson, Spokane, Pres.

Apr. 17-19. Louisiana Teachers' Association at New Orleans.

Apr. 24-25. Michigan Superintendents and School Board Members at Lansing.

Apr. 26. Southern Ohio and Southwestern Ohio Teachers' Associations at Hamilton. John O'Leary, Eaton.

Apr. 27-28. Northwest Missouri Teachers' Association at Maryville. A. H. Cooper, Supt. Schools.

Apr. 30-May 3. Kentucky Educational Association at Louisville. R. L. McFarland, Owensboro, secy.

May 1-3. National Peace Congress at St. Louis, Mo. Mrs. Fannie F. Andrews, Boston, secy.

May 1-3. Georgia Teachers' Association at Atlanta. A. G. Miller, Waycross, pres.

May 1-3. Mississippi Teachers' Association at Hattiesburg. H. L. McCleskey, Hazelhurst, secy.

May 6. Playground and recreation Assoc. of America at Richmond, Va.

May 7-10. Western Drawing and Manual Training Teachers' Association at Des Moines, Ia. F. D. Crawshaw, Madison, Wis.

May 8-10. Iowa Manual Arts' Association at Des Moines. W. O. Abram, Newton, secy-treas.

May 8-10. National Society for the Study and Prevention of Tuberculosis at Washington, D. C.

May 9-10. Connecticut Association of School Superintendents at New Haven.

May 10. Nebraska History Teachers' Association and Missouri Valley History Teachers' Association at Omaha. Ada L. Atkinson, Omaha, pres.

May 15-16. American Federation of Arts at Washington, D. C. Lella Mechlin, Washington, D. C., secy.

May 16-17. New England History Teachers' Association at Boston and Salem. W. H. Cushing, Cambridge, secy.

May 20-22. American Society of Inspectors of Plumbing and Sanitary Engineers at Louisville, Ky. T. J. Claffy, Chicago, Ill., pres.

June 24-26. Society for Promotion of Engineering Education at Minneapolis.

June 24-27. Maryland Teachers' Association at Annapolis. H. D. Caldwell, Chesapeake City, secy.

June 24-27. Ohio Teachers' Association at Cedar Point. H. W. Kershner, Cedar Point, secy.

June 30-July 4. Conference of Superintendents and Principals of Maine at Castine.

SUMMER SCHOOLS.

The school board of Lynn, Mass., has included in the annual estimate the sum of \$2,000 for the purpose of conducting summer schools for backward pupils. The action was taken upon the recommendation of Supt. F. J. Peaslee who declared the work was of great value to those pupils who would otherwise lose a year's time.

The school board of South Bend, Ind., has provided for the opening of a vacation school during the coming summer. The school will be for the grades as well as the high school and the most experienced teachers will have charge of the classes. The idea has been discussed for some time and was frequently urged by Supt. L. J. Montgomery.

Iola, Kans. The school board has recently decided to establish a summer school. The school is to be open to pupils who have failed in the classwork or who have in some way been retarded. It is not intended to be an opportunity for pupils to make a grade.



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The difficulties which a teacher in search of a position encounters were illustrated at a recent dinner by Commissioner C. N. Kendall of New Jersey.

A good many years ago, when Mr. Kendall was superintendent in a western city, he had occasion to write several letters of recommendation for a likely young fellow who wished to try for the principalship of some township schools in western Nebraska.

Several weeks later, the young chap returned rather disconsolate and the following conversation took place:

Commissioner Kendall—"Well, didn't you land the job?"

Young Chap—"Nope, had no show!"

Mr. Kendall—"Why! That's strange. I thought those letters would just about turn the trick for you. How was it, any way?"

Young Chap—"Well, you see there were five members on the board. The night they met I learned that only two of them could read and those two were out of town."

Made Him Independent.

The Parson—"Well, Tommy, how are you getting along at school?"

Tommy—"Fine. I've got so I can write my own excuses now."

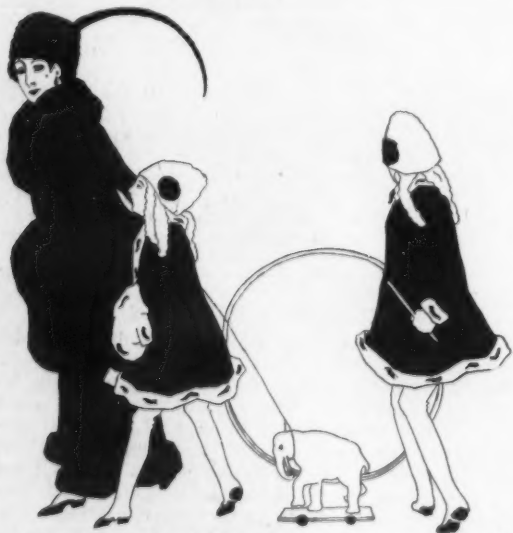
Ruined Hopes

Old Party—"Why do you cry so, my little man?"

Small Boy—"I—I dreamt last night dat de schoolhouse burned down and—"

O. P.—"But I don't think that it has."

S. B.—"I knows it. I kin see de top over der trees." (Cries louder.)



Girl—Today, mother, teacher let us write with ink for the first time.

Mother—Well, then, I suppose there will be some more waists to wash.

Girl—O no, mother, the ink won't come out.

Thoughtless.

The professor was writing busily one evening when one of his children poked her head into the room.

"Well, what do you want? I can't be disturbed now," he said.

"I only want to say good-night."

"Never mind now. In the morning will do as well."

A New Conception of the Scotch Dialect.

Some years ago the college entrance requirements in English called for the "careful study" of four or five English classics, one of which was Carlyle's *Essay on Burns*. The applicants for admission to a certain Pennsylvania college were asked to make an estimate of the literary value of Burn's poetry. One aspirant for Freshman standing concluded his little essay with the following remarkable sentence: "Burns would of been a far greater poet if he had not of used so much slang."

Preaching and Practise.

The college instructor should take pains to practise what he preaches says the Youth's Companion.

One member of a class in English composition brought his theme to the professor after recitation-hour, in order that the professor might read a marginal correction which he had written, and which the pupil had been entirely unable to make out.

"Why," explained the professor, "that says, 'Write more plainly!'"

How many seed compartments are there in an apple?" he queried.

No one knew.

"And yet," said the school inspector, "all of you eat many apples in the course of a year, and see the fruit every day, probably. You must learn to notice the little things in nature."

The talk of the inspector impressed the children, and they earnestly discussed the matter at recess time.

The teacher the next day overheard this conversation in the playyard. A little girl, getting some companions around her, gravely said:

"Now, children, just s'pose that I'm Mr. Inspector. You've got to know more about common things. If you don't, you'll grow up to be fools. Now tell me," she said, looking sternly at a playmate, "how many feathers has a hen?"

Two of a Kind.

The dean of a Western university was told by the students that the cook was turning out food not "fit to eat."

The dean summoned the delinquent, lectured him on his shortcomings, and threatened him with dismissal unless conditions were bettered.

"Why, sir," exclaimed the cook, "you oughtn't to place so much importance on what the young men tell you about my meals! They come to me in just the same way about your lectures."

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Soft; No. 3-Medium hard; No. 4-Hard

NO BETTER PENCIL FOR SCHOOL USE**EBERHARD FABER, New York****The Artifice of Man.**

The people chose a mayor who was affable and bland, Because the bosses named him and he bore the party brand.

The mayor made appointments from among his party friends, And thus redeemed his pledges and advanced his party's ends.

These friends awarded contracts, in the customary way, To sundry wise contractors who could make the business pay.

And then the wise contractors, who approved of party rule, Put up a gorgeous building for a model public school.

Its walls were lath and plaster and the stairs were kindling wood, The mayor's keen inspectors viewed the work and found it good.

A fire swept the building—no, that wasn't in the plan; (How frail amid the elements the artifice of man!)

—Author Unknown.

Auf dem Heimwege.

Einige Schueler trafen auf eine Bauerin, die mehrere Esel vor sich her trieb. "Guten Tag, Eselmutter, riefen sie ihr zu."

"Guten Tag, meine Kinder," erwiderte die Frau.

Got What He Asked For.

A distinguished professor of bacteriology, wishing to study infected meats, according to Lippincotts, went into a butcher-shop and asked the butcher if he had any measly pork.

"No, no, sir!" answered the indignant man. "All our meats are fresh—first class!"

"I'm sorry. Could—couldn't you in some way procure me some?"

"Why, yes; if that's the kind you want."

A few days later the professor stepped into the shop.

"I came in to see if you had secured that measly pork for me?"

"Why, yes, sir. Didn't you get it? I had it sent up for your dinner last night."

Convincing Evidence.

Dean Bleyer of the School of Journalism of the University of Wisconsin, is a firm believer in the educational value of current history. His belief has been strengthened by the replies received in a set of freshmen test papers submitted in answer to the question: Who is John D. Rockefeller and what has he accomplished?

Invented the hookworm.

Made Ida Tarbell famous.

Is a Sunday-School teacher.

Discovered the oil fields in Pennsylvania.

President of the University of Chicago.

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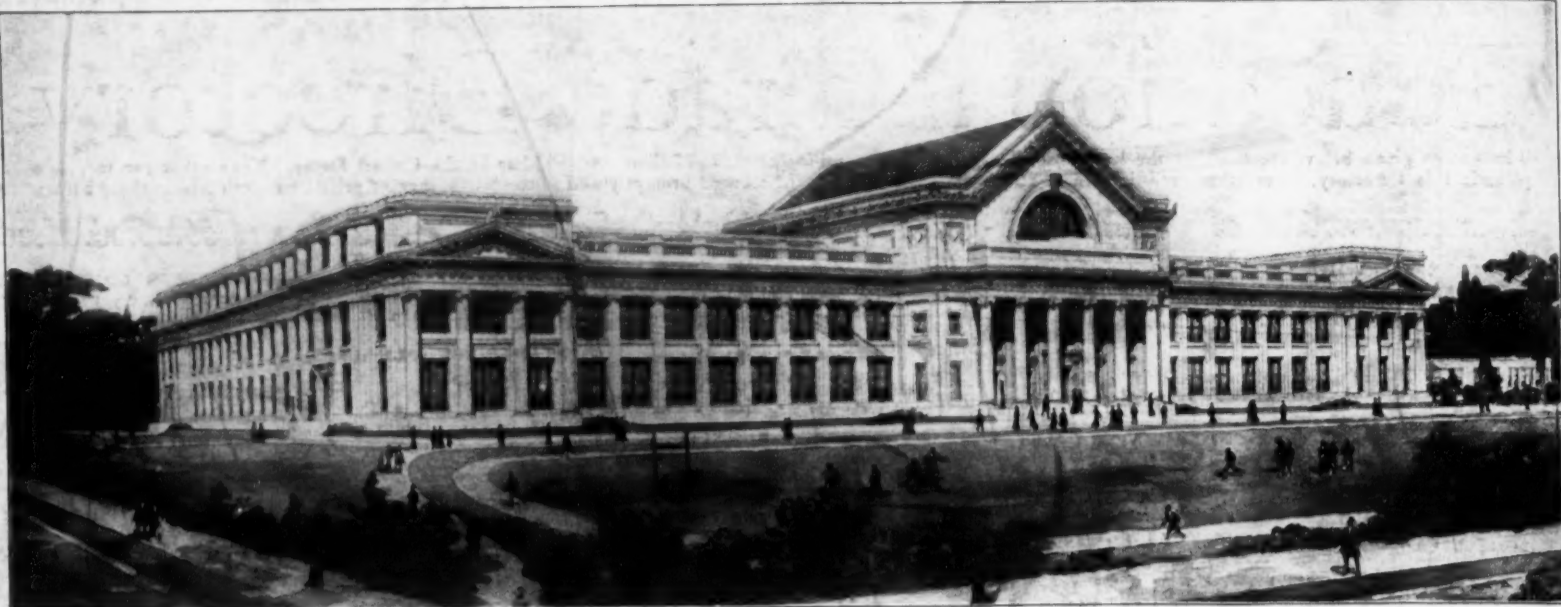
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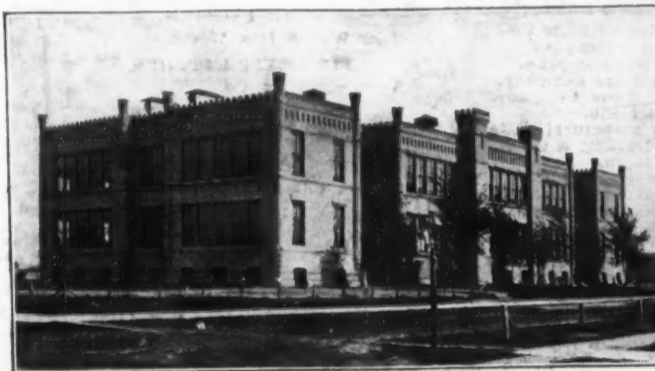
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